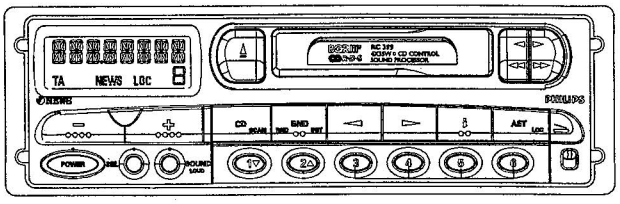
Cassette car radio 22RC359/00 22RC359/80
22RC359/30 22RC359/32

Service
Service
Service



For repair information of the Cassette deck see Service Manual of Auto Cassette Deck CDS36-PR n° 4822 725 24650 and 4822 725 24114

ServiceManual

For this set please refer to Service Manual 22RC229/00 ../80 22RC329/00 ../80 - 4822 725 24396 with the following modifications :

12 V

1: Mechanical

Changed positions

200 :	4822 459 04824	Detachable unit assy	215 : 4822 443 10847	Flap cassette
375 :	4822 736 15753	Directions for use		

Added position

	4822 320 12188	Cable CD changer		

2: Electrical

Changed positions

1400 :	4822 265 11083	connector block	3411 :4822 051 20393	39K00 5% 0,1W
7500 :	4822 209 15983	TMP87CM21F-RC359		

Added positions

2223 :	4822 124 23504	2,2µF 20% 50V	2225 :4822 124 23504	2,2µF 20% 50V
2226 :	4822 124 23504	2,2µF 20% 50V	2600 :5322 122 34098	10NF 10% 63V
2601 :	5322 122 32654	22NF 10% 63V	3601 :4822 051 20102	1K00 5% 0,1W
3602 :	4822 051 20121	120R00 5% 0,1W	3603 :4822 116 10063	PTC 8,2R 25% 30V
3604 :	4822 116 10063	PTC 8,2R 25% 30V	3699 :4822 051 20008	0R00 jumper
5600 :	4822 242 81002	Filter CST6,00GW-TF01	5601 :4822 157 71206	Coil BLM21A10PT
6600 :	4822 130 10657	Diode PTZ5.6A	6601 :4822 130 10657	Diode PTZ5.6A
7600 :	4822 209 32743	MSM6307GS		

Contents **page**

Technician's remarks	2
Sound Process Part schematic diagram	3-3a
Microcontroller Part1 schematic diagram	4-4a
Microcontroller Part2 schematic diagram	5-5a
Main PWB Layout	6-6a

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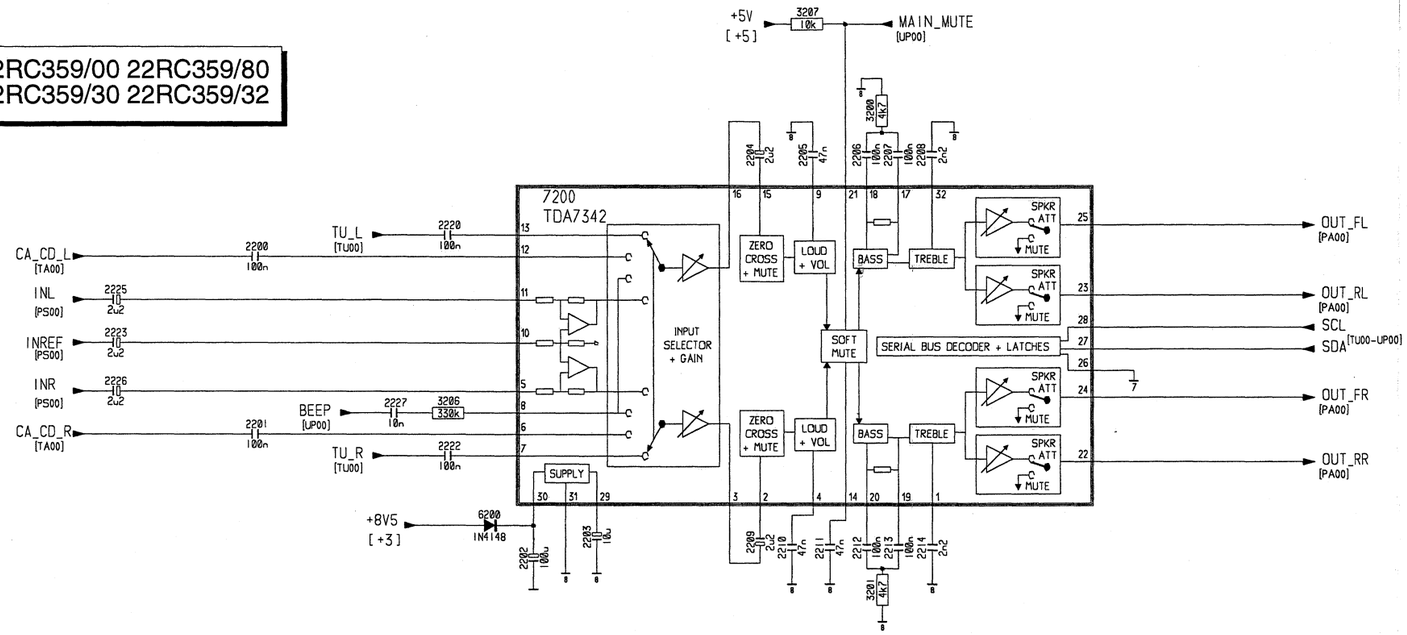
PHILIPS

Technician's remarks

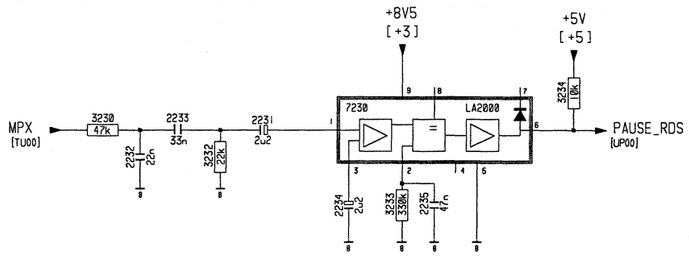
22RC359/00 22RC359/80 22RC359/30 22RC359/32

SOUND PROCESS PART [SP00]



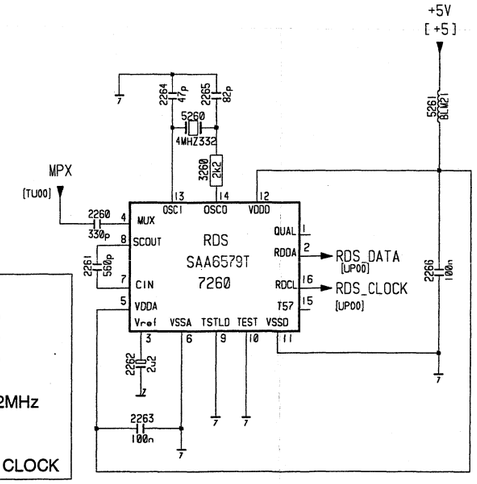
7200 TDA7342

1 = 4.0V	17 = 4.0V
2 = 4.0V	18 = 4.0V
3 = 4.0V	19 = 4.0V
4 = 4.0V	20 = 4.0V
5 = 4.0V	21 = 5.0V
6 = 4.0V	22 = 3.3V
7 = 4.0V	23 = 3.3V
8 = 4.0V	24 = 3.3V
9 = 4.0V	25 = 3.3V
10 = 4.0V	26 = GND
11 = 4.0V	27 = 5.0V
12 = 4.0V	28 = 5.0V
13 = 4.0V	29 = 4.0V
14 = 7.2V	30 = 7.9V
15 = 4.0V	31 = GND
16 = 4.0V	32 = 4.0V



7230 LA2000

1 = 1.9V	5 = GND
2 =	6 = 5.1V
3 = 2.0V	0.0V PAUSE
4 = N.C.	7 = N.C.
	8 = N.C.



7260 SAA6579T

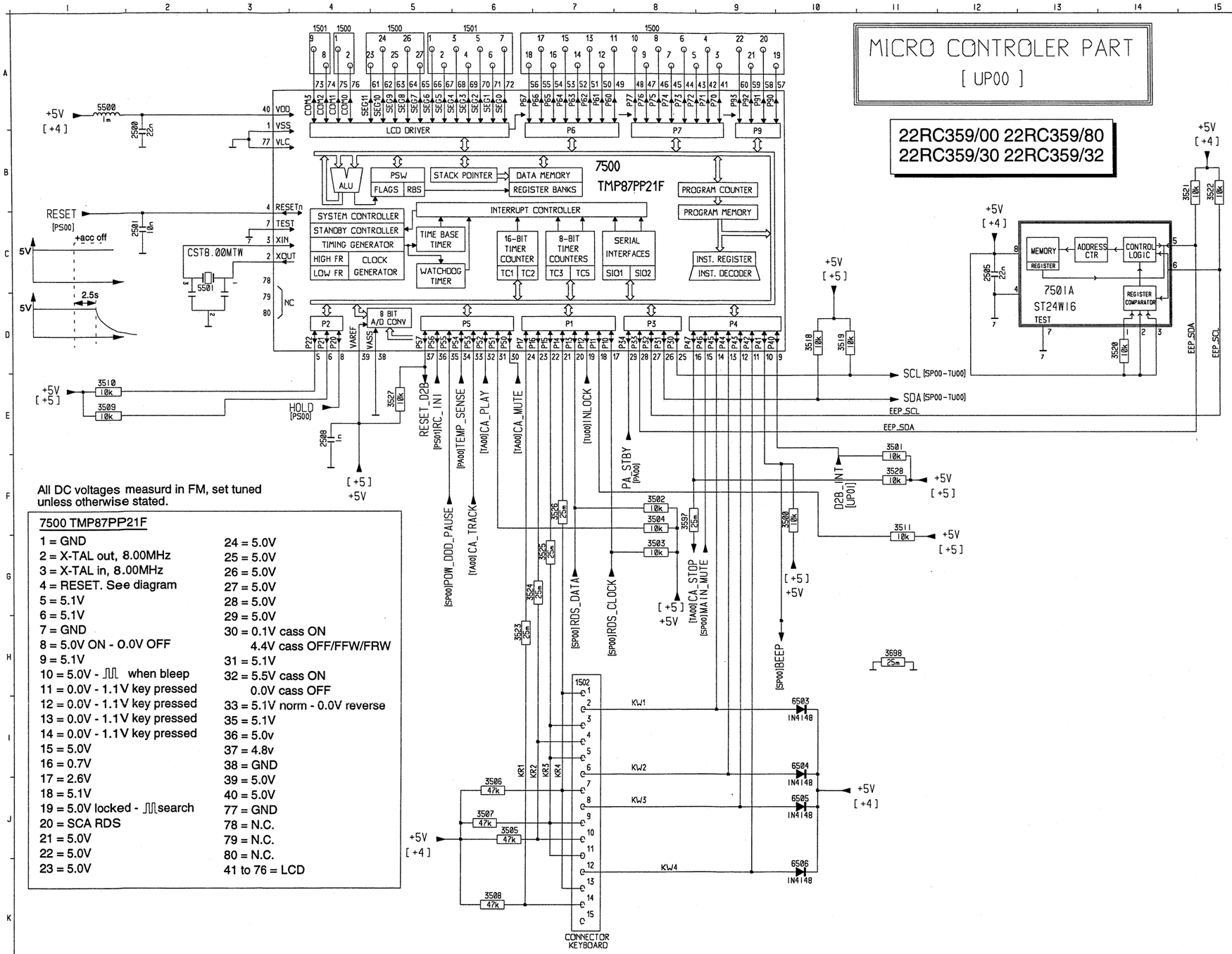
1 = N.C.	9 = GND
2 = RDS DATA	10 = GND
3 = 2.5V	11 = GND
4 = 2.5V	12 = 5.0V
5 = 5.0V	13 = 4.332MHz
6 = GND	14 = 2.5V
7 = 2.5V	15 = N.C.
8 = 2.6V	16 = RDS CLOCK

2200	C 4
2201	D 4
2202	F 6
2203	E 7
2204	B 8
2205	B 9
2206	B 9
2207	B10
2208	B10
2209	E 8
2210	E 9
2211	E 9
2212	E 9
2213	E10
2214	E10
2216	F14
2218	F14
2220	B 5
2222	E 5
2223	C 2
2225	C 2
2226	D 2
2227	D 5
2231	H 3
2232	H 2
2233	H 2
2234	I 4
2235	I 5
2260	I13
2261	I13
2262	J13
2263	K13
2264	H13
2265	H14
2266	I16
3200	A 9
3201	F 9
3206	D 5
3207	A 9
3230	H 2
3233	I 4
3234	H 6
3235	H 3
3236	H 2
3260	H14
5260	H14
5261	H16
6200	E 6
7200	B 6
7230	H 4
7260	I14

MICRO CONTROLER PART

[UP00]

22RC359/00 22RC359/80
22RC359/30 22RC359/32



All DC voltages measurd in FM, set tuned unless otherwise stated.

7500 TMP87PP21F

1 = GND	24 = 5.0V
2 = X-TAL out, 8.00MHz	25 = 5.0V
3 = X-TAL in, 8.00MHz	26 = 5.0V
4 = RESET. See diagram	27 = 5.0V
5 = 5.1V	28 = 5.0V
6 = 5.1V	29 = 5.0V
7 = GND	30 = 0.1V cass ON
8 = 5.0V ON - 0.0V OFF	4.4V cass OFF/FFW/FRW
9 = 5.1V	31 = 5.1V
10 = 5.0V - ⎍ when bleep	32 = 5.5V cass ON
11 = 0.0V - 1.1V key pressed	0.0V cass OFF
12 = 0.0V - 1.1V key pressed	33 = 5.1V norm - 0.0V reverse
13 = 0.0V - 1.1V key pressed	35 = 5.1V
14 = 0.0V - 1.1V key pressed	36 = 5.0v
15 = 5.0V	37 = 4.8v
16 = 0.7V	38 = GND
17 = 2.6V	39 = 5.0V
18 = 5.1V	40 = 5.0V
19 = 5.0V locked - ⎍search	77 = GND
20 = SCA RDS	78 = N.C.
21 = 5.0V	79 = N.C.
22 = 5.0V	80 = N.C.
23 = 5.0V	41 to 76 = LCD

1500	A 4
1500	A 8
1500	A 5
1501	A 6
1501	A 4
1502	H 7
2500	B 2
2501	C 2
2505	C12
2508	E 4
3500	F10
3501	E11
3502	F 8
3503	G 8
3504	F 8
3505	J 6
3506	J 6
3507	J 6
3508	K 6
3509	E 1
3510	E 1
3511	F11
3518	D10
3519	D10
3520	D14
3521	B15
3522	B15
3523	H 6
3524	G 6
3525	G 7
3526	F 7
3527	E 5
3528	F11
3597	F 8
3698	H11
5500	A 1
5501	C 2
6503	10
6504	10
6505	J10
6506	K10
7500	B 7
7501	D13

uP CONTROLLER PART 01
[UP01]

22RC359/00 22RC359/80
22RC359/30 22RC359/32

2600	D	2
2601	F	6
3601	D	3
3602	E	6
3603	D	7
3604	E	7
3699	E	1
5600	D	3
5601	F	6
6600	E	6
6601	E	6
7600	F	3

D2B_INT
[UP00]

RESET_D2B
[UP00]

2600 10n

CSTCS6.00MG
5600
3601 1k

POR DS INT CLKO CLKI TEST BUSO BUSI

[SP00-TU00-UP00]
SDA
SCL
[SP00-TU00-UP00]

3699 25m

SDA 14
SCL 15
I2C 7

I^2C

D^2B

D2B+ 20
D2B- 19

MSM6307GS-VK
7600

R/W 5
A/D 6
+VCC 17
GND 16

SLAVE ADRESSE
A0 A1 A2
10 11 12

PARALLEL DATA IN/OUT
D0 D1 D2 D3 D4 D5 D6 D7
27 29 30 31 32 1 2 3

3602 120

6600 PTZ5.6A

3603 8R2

D2B+ [PS01]

6601 PTZ5.6A

3604 8R2

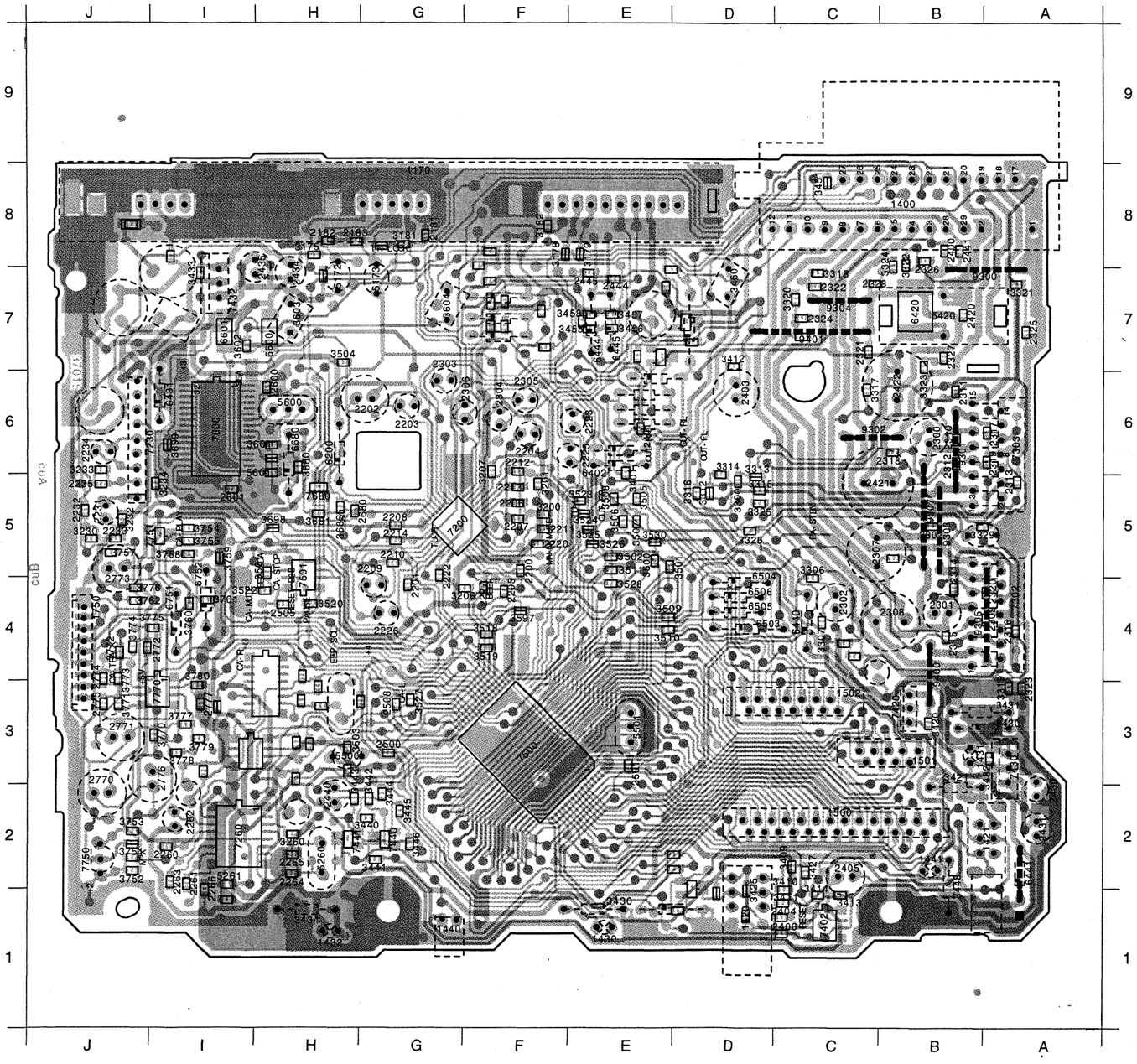
D2B- [PS01]

+5V
[+5]

5601 BLM21

2601 22n

1170 G 8	1440 G 1	2203 G 6	2234 J 6	2305 F 6	2431 A 2	2776 I 3	3450 D 7	5500 H 3	6431 I 6	6751 I 4	7432 I 7	9305 A 4
1400 B 8	1441 B 2	2204 F 6	2262 I 2	2306 F 6	2434 H 7	3329 B 5	3603 H 7	5501 E 3	6444 E 7	6752 I 4	7750 J 2	9307 B 5
1420 D 1	1500 C 2	2209 G 4	2300 B 6	2403 D 6	2435 I 7	3421 B 2	3604 G 7	5600 H 6	6445 E 7	7230 J 6	9300 A 7	9400 B 4
1421 A 2	1501 B 3	2223 E 6	2301 B 4	2405 C 2	2440 H 2	3430 E 1	5172 H 7	6200 H 6	6503 D 4	7302 A 4	9301 B 6	9401 C 7
1430 E 1	1502 C 3	2225 E 6	2302 C 4	2421 C 5	2770 J 2	3431 B 3	5173 G 7	6402 E 6	6504 D 4	7303 A 6	9302 C 6	9410 A 2
1431 B 3	1750 J 4	2226 G 4	2303 G 6	2422 B 6	2771 J 3	3434 H 1	5260 H 2	6403 E 6	6505 D 4	7420 B 3	9303 B 5	
1432 H 1	2202 G 6	2231 J 5	2304 F 6	2430 A 2	2773 J 5	3448 B 2	5420 B 7	6430 A 3	6506 D 4	7430 A 3	9304 C 7	



22RC359/00 22RC359/80 22RC359/30 22RC359/32

2181 G 8	3306 C 4	3761 I 4
2182 H 8	3307 C 4	3762 J 4
2183 H 8	3312 D 5	3770 I 3
2200 F 5	3313 D 5	3771 J 3
2201 G 4	3316 D 5	3772 J 4
2205 F 4	3317 C 6	3773 J 4
2206 F 5	3318 C 7	3774 J 4
2207 F 5	3319 A 3	3775 I 4
2208 G 5	3320 C 7	3776 J 4
2210 G 5	3321 A 7	3777 I 3
2211 F 5	3322 B 8	3778 I 3
2212 F 6	3323 B 7	3779 I 3
2213 F 5	3324 B 8	3780 I 3
2214 G 5	3325 D 5	4999 F 9
2220 F 5	3326 D 5	5261 I 2
2222 G 5	3401 E 5	5601 H 5
2227 F 4	3409 C 2	6420 B 7
2232 J 5	3410 C 2	6600 H 7
2233 J 5	3411 C 1	6601 I 7
2235 J 5	3412 D 7	7200 G 5
2260 I 2	3413 C 1	7260 I 2
2261 I 2	3414 C 1	7402 C 1
2263 I 2	3420 B 3	7440 G 2
2264 H 2	3425 D 1	7441 H 2
2265 H 2	3427 C 2	7500 F 3
2266 I 1	3432 A 3	7501 H 5
2309 A 4	3433 I 7	7600 I 6
2311 B 6	3440 G 2	7751 I 5
2313 A 5	3441 G 2	7770 I 3
2314 B 4	3442 G 2	
2315 B 4	3443 H 2	
2316 A 4	3444 G 2	
2317 A 6	3445 G 2	
2318 B 6	3446 G 2	
2319 A 6	3451 C 8	
2320 A 4	3455 E 7	
2321 C 7	3456 E 7	
2322 C 7	3457 E 7	
2323 A 3	3458 E 7	
2324 C 7	3500 E 5	
2325 A 7	3501 E 5	
2326 B 8	3502 E 5	
2327 B 7	3503 H 3	
2328 C 7	3504 H 7	
2400 B 8	3505 E 5	
2401 E 6	3506 E 5	
2404 C 1	3507 E 5	
2406 C 1	3508 E 5	
2420 B 7	3509 E 4	
2444 E 7	3510 E 4	
2445 E 7	3511 E 5	
2500 G 3	3518 F 4	
2501 E 3	3519 F 4	
2505 H 4	3520 H 4	
2508 G 3	3521 H 5	
2600 H 6	3522 H 4	
2601 I 5	3523 E 5	
2772 J 4	3524 E 5	
2774 J 4	3525 E 5	
2775 J 3	3526 E 5	
2777 I 3	3527 G 3	
3175 H 8	3528 E 4	
3178 F 8	3530 E 5	
3179 E 8	3597 F 4	
3181 G 8	3601 H 6	
3182 F 8	3602 I 7	
3200 F 5	3698 H 5	
3201 F 5	3699 I 6	
3206 F 4	3751 J 2	
3207 F 6	3752 J 2	
3230 J 5	3753 J 2	
3232 J 5	3754 I 5	
3233 J 6	3755 I 5	
3234 I 5	3757 J 5	
3260 H 2	3758 I 5	
3300 D 5	3759 I 5	
3302 B 5	3760 I 4	

Cassette car radio 22RC229/00 22RC229/80
22RC329/00 22RC329/80

Service
Service
Service

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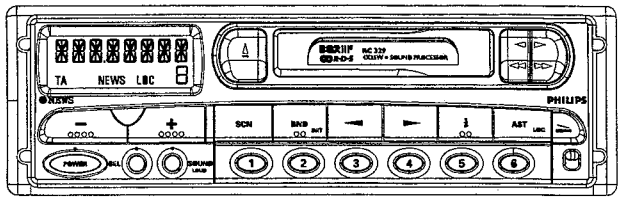

For repair information of the Cassette deck see Service Manual of Auto Cassette Deck :
TN301NX265 (22RC229/00 22RC229/80) 4869 2
CDS36-PR (22RC329/00 22RC329/80) 5032

11

ServiceManual

12 V

Contents **page**

Controls - Keyboard schematic diagram	-2
Connections	-3
Technical data	-4
Servicing hints	-5-5a
Init mode	-6-6a
Checks and alignements - IC pinning	-7-7a
Block diagram	-8-8a
Tuner part schematic diagram	-9-9a
Main PWB layout	-10-10a
Sound Process part schematic diagram	-11-11a
Power supply schematic diagram	-12-12a
Power part schematic diagram	-13-13a
Microcontroller part schematic diagram	-14-14a
Main PWB layout	-15-15a
Tape part schematic diagram	-16-16a
Exploded view / Mechanical partslist	-17-17a
Electrical partslist	-18-18a-19
Technician's remarks	-20

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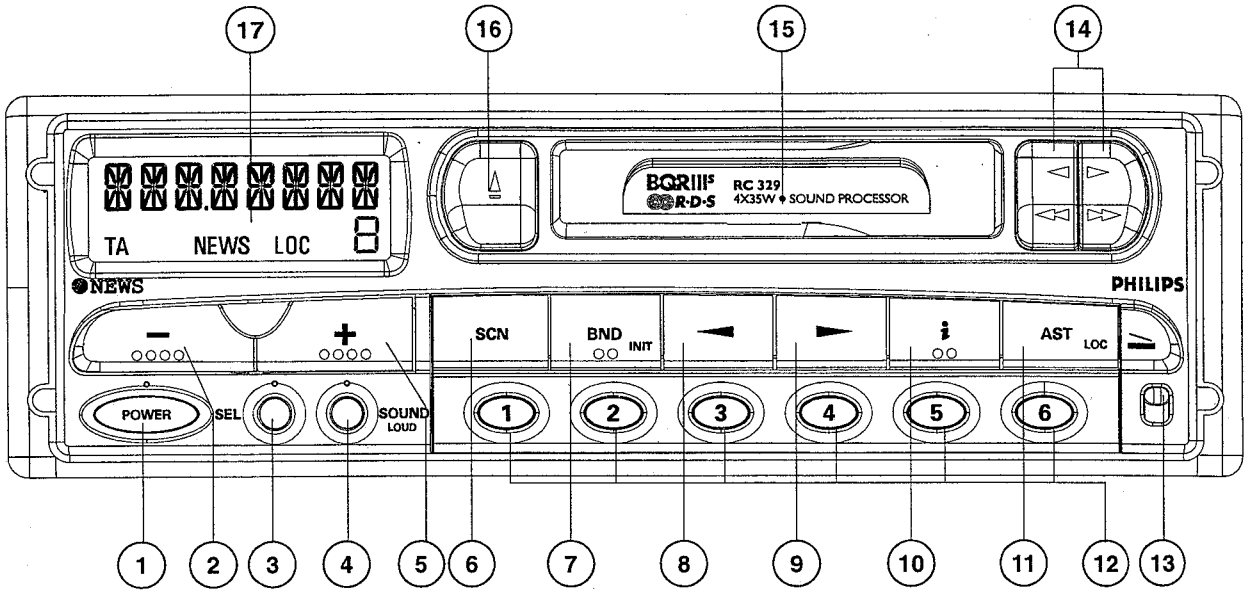
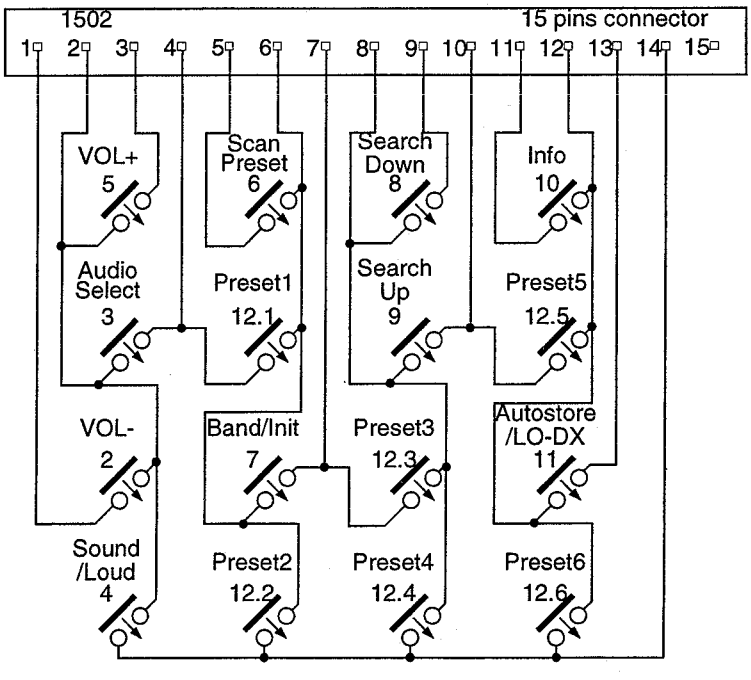
5331

CONTROLS



1	On / Off	10	Info
2	Volume -	11	Autostore / Local - DX
3	Audio selection	12	Presets Selection
4	Sound / Loudness	13	Release Knob for detachable unit
5	Volume +	14	Ffw / Frw Buttons (329)
6	Scan	15	Cassette Opening + Flap
7	Band Selection / Init	16	Eject Button (329)
8	Search Down		FFW / Eject (229)
9	Search Up	17	Display

KEYBOARD SCHEMATIC DIAGRAM



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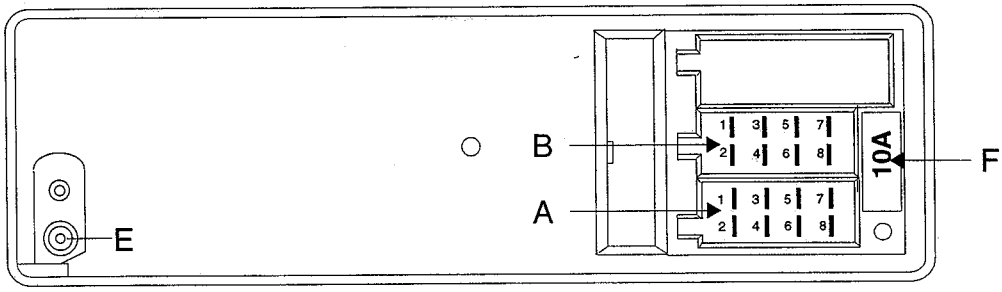
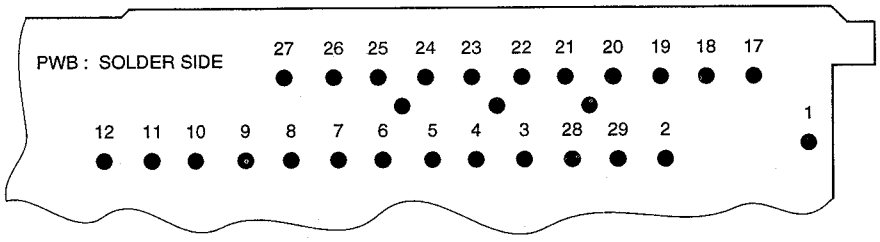
CONNECTIONS





Connector A : Power supply	**Pin Nbr on PWB**
A1	
A2 - Remote Control Ground	27
A3 - Remote Control Input	25
A4 - Battery + Permanent	3
A5 - Output +14V (Automatic Aerial)	29
A6 -	28
A7 - Battery + Switched by ignition key (Main Supply)	2
A8 - Ground	17

Connector B : Loudspeaker supply	
B1 - Rear Right +	7
B2 - Rear Right -	8
B3 - Front Right +	6
B4 - Front Right -	5
B5 - Front Left +	4
B6 - Front Left -	20
B7 - Rear Left +	19
B8 - Rear Left -	18

Connector E : Aerial

E - Aerial Plug

F : Fuse 10A

TECHNICAL DATA

GENERAL

Power supply	:14.4V DC
Dimensions	:180x150x51.8 mm

RADIO

LW	: 144-288 KHz
MW	: 531-1629 KHz
FM	: 87.5-108 MHz
IF-AM	: 450 KHz / 10.7 MHz
IF-FM	: 10.7 MHz / 72.2 MHz
Sensivity 26dB S/N	: 26 µV (LW)
	: 18 µV (MW)
	: 3,4 µV (FM)
Limitation α-3dB	: 3 to 20 µV

CASSETTE

Cassette mechanism	:TN-301NX-265 (229)
Number of tracks	:2
Tape speed	:4.75 cm/sec
Wow and flutter	:≤ 0.35% (+5° to +35°)
Crosstalk	:> 21dB
Cassette mechanism	:CDS 36-PR (329)
Number of tracks	:2x2
Tape speed	:4.75 cm/sec
Wow and flutter	:≤ 0.35% (+10° to +45°)
Crosstalk	:> 21dB

AMPLIFIER

Output power	:4x18W / 4Ω (THD = 10%)
Loudness	:+7dB ± 3dB at 60Hz
	:+0dB ± 3dB at 10kHz
Treeble control	:12 ± 3dB at 10kHz
Bass control	: 9 ± 3dB at 60Hz
Balance control	:50 +0-20dB
Fader	:50 +0-20dB

ESD

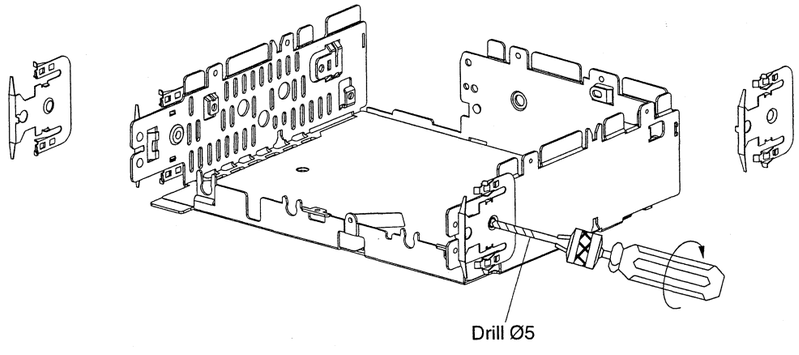
WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD equipment available:

Anti-static table mat large 1200X650X1.25mm	4822 466 10953
small 600X650X1.25mm	4822 466 10958
Connection box (1Mohm)	4822 395 10223
Extendible cable (to connect wrist band to connection box)	4822 320 11307
Connecting cable (to connect table mat to connection box)	4822 320 11305
Earth cable (to connect any product to mat or box)	4822 320 11308
Complete kit ESD3 (combining all above products)	4822 310 10671
wristband tester	4822 344 13999

LOCKING SPRING REMOVAL

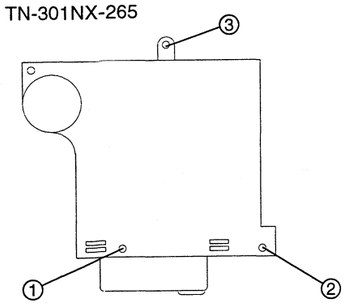


If a Mounting Spring needs to be changed,you have to first eliminate the fastening by drilling it out with a ∅5mm hand-drill

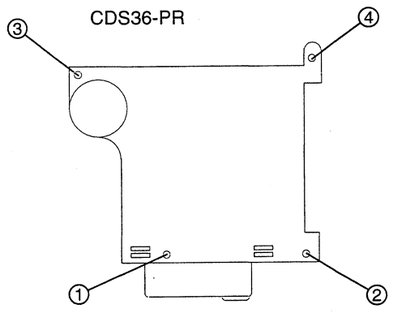
For the fixing of the new one , use a counter-sunk screw ∅3mm, length 5 or 6mm and a M3 nut

SCREWING SEQUENCE DECK (Top view)

TN-301NX-265



CDS36-PR



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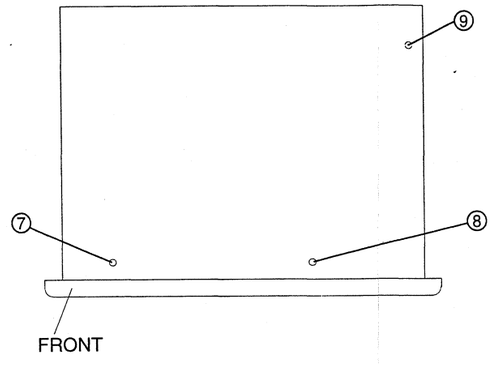
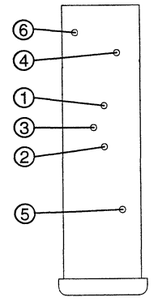
22RC329/00 ../80

SCREWING SEQUENCE PWB (Top view) (Left view)





REMOVING THE PWB

1) Disconnect all the cables and flex foils, and disengage the lamp from the light box of the LCD
2) Remove the front (1 screw 2.5x12 black behind the detachable unit)
3) Remove the deck (3 or 4 screws 2.5x6)
4) Disengage the lamps from the metal frame
5) Remove the blinking LED
6) Remove the bracket of connector block (1 screw 2.5x6 on the rear side and 1 screw 2.5x12 on the left side)
7) Remove the antenna plug bracket (1 screw 2.5x6 on the rear side)
8) Remove all the others screws (For remove the PWB , you don't have to remove the screws 1,2 and 3, you can remove the PWB with the cooling bracket)

Now you can remove the PWB (see screwing sequence)

MOUNTING THE PWB

1) Put the Pwb in the box frame
2) Put the bracket of the connector block
3) IMPORTANT : To prevent any problem of contact when inserting the detachable unit, push on the rear part of the PWB in order to put in contact its front edge with the metal front.
This operation ensures that the detection switch is in right place
4) Follow the screwing sequence PWB
5) Put the lamps in the metal frame
6) Follow the screwing sequence deck
7) Insert the blinking led
8) Put the Front plate ,connect all the cables and flex-foils and insert the lamp in the light box of the lcd

INIT MODE:

Entering the Init Mode:
Switch ON the set. Press the BAND key for at least 2 seconds, until you hear a beep.
The display shows "INITIAL".
Press the ◄ or ► key one or more times until the option you want to modify is displayed.
Briefly press the AST key one or more times to adjust the choice.
- The choice shown on the display will be memorized by the set when you select another option or leave the "INIT" mode.
Press the BAND key for at least 2 seconds to leave the "INIT" mode.
Note: the set automatically leaves the "INIT" mode about 1 minute after your last operation.

List of "INIT" options: (Initial factory settings shown in **bold**).

Option ◄ or ►	Choice (AST)	Usage
SRC	**CDC**, AUX	Source connected to connector C3: - Select CDC for a Philips CD Changer (D2B type); - Select AUX for a portable audio player.
MW	OFF **ON**	Select OFF to suppress MW band if it is not used.
LW	OFF **ON**	Select OFF to suppress LW band if it is not used.
TUN	**EURO** AMER	Select the tuner according to European or American standards.

TEST MODES:

2) KEYBOARD TEST

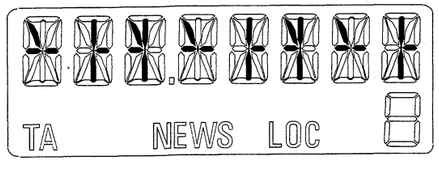
This test is called by switching the set On while keeping pressed the preset 3 key. The display shows: T - -
Then press each key at least one time. A different number will appear each time you press a new key (e.g. T 01),according to the table below:

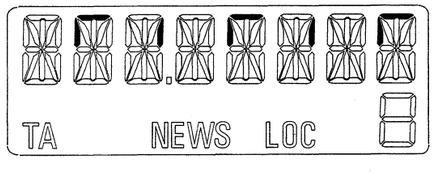
Vol -	Vol +	SCN	BND	◄	►	i	AST	Sel	Sound	P1	P2	P3	P4	P5	P6
T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	T11	T12	T13	T14	T15	T16

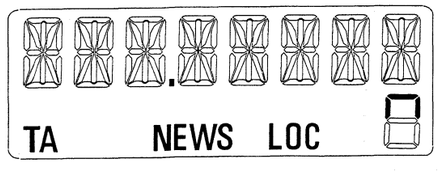
When all the keys are pressed, if all is correct, the display shows all segments lit..
This test can be exited at any moment by switching Off the set.

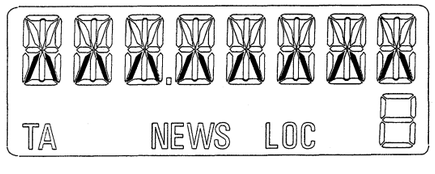
1) DISPLAY TEST

At the end of the keyboard test, when all the segments are displayed, press preset 3 key.
The display shows in sequence, each time you press preset 3 key, 4 different screens as follows:

1 

2 

3 

4 

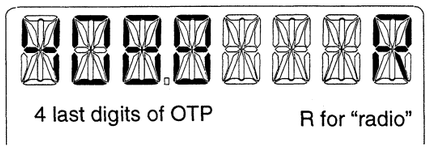
The last screen shows all segments lit.
To quit this mode, switch Off the set .

3) FIELD TEST

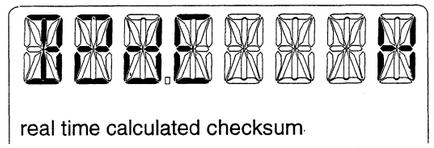
This test is called by pressing simultaneously preset 2 and 5 keys (set On).
The display shows:
4 digits indicating the tuned frequency
5th digit: Selected frequency quality
6th digit: Best AF quality
7th digit: Multipath 0..F (0 = no multipath)
8th digit: Field level 0..F (F = best fieldstrength)
This test can be exited by switching Off the set or by pressing again presets keys 2 and 4 at the same time.

4) CHECK SUM

This test is called by pressing simultaneously preset 3 and 5 keys (set On)
The display shows two screens during 3 seconds each.
first screen:



2nd screen:



CHECKS AND ALIGNMENTS

No alignment is needed for radio part. IC96 tuner is pre-aligned.

For all measurement, please refer to "General Check & Alignment procedures for Car Systems' 4822 725 25456, unless otherwise stated.

Checks:

Supply voltages (set Off)

SET OFF	Voltage	Current + Acc ON	Current + Acc OFF	V reset Pin 4 µP	Vdd Pin 40 µP	V hold Pin 8 µP
Acc supply	+14.4V	< 3mA	< 1.5mA	min Vdd x 0.7	min 4.5V max 5.5V	max Vdd x 0.3

Supply voltages (set On)

V reset pin 23 µP	V pin 33 µP	V hold pin 24 µP	V 5V E 7501	V 8.5V E 7502	V EEprom pin 8
max Vdd x 0.3	min 4.5V max 5.5V	min Vdd x 0.7	min 4.6V max 5.4V	min 7.9V max 9.0V	min 4.5V max 5.5V

Reference oscillator frequencies

device	µP 7500
pin	3
frequency	8 MHz 0.5%

Deck part
Use test cassette SBC420 4822 397 30071 unless otherwise stated.

Tape speed and flutter: Use 3.15KHz test tone	Supply voltage	Tape speed	Flutter (wtd)
	10.8 - 15.6 V	4.76cm/s +3% -1%	< 0.35%

Crosstalk : use 1KHz 0dB crosstalk signal	< -30dB at speakers output R & L

FM part
- Demodulated FM levels

Input	Output of IC96 (pin 15 & 16)
98 MHz	300 mV ± 50 mV

- Limiting point α-3dB

Range	Input	min	nominal	max
87.5 to 108 MHz	1mV 400Hz	3µV	6µV	14µV

- Check of search levels

Search levels	Input	Dx: 8µV < X < 22µV Local : 190µV < X < 290µV
	98 MHz	

- Pause detector

f = 94MHz fm = 1KHz	Δf = 0.6KHz	Pin 6 of 7230 < 0.8V
	Δf = 3.5KHz	Pin 6 of 7230 > 2.0V

PCS 88 142

AM part
- Usable sensivity 26dB S/N

Sensivity at 26dB S/N	207 KHz	m = 30%	1KHz	< 38µV	typ 28
	1053 KHz			< 30µV	typ 22

- Check of search levels
Conditions: start with set in FM DX mode, change to AM = 1053KHz

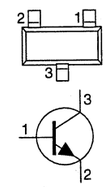
Search levels	Input	low : 35µV < X < 140µV high : 7µV < X < 28µV
	1053KHz	

INTEGRATED CIRCUITS

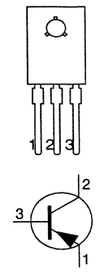
SAA6579T Radio Data System demodulator

SYMBOL	PIN	DESCRIPTION
QUAL	1	quality indication output
RDDA	2	RDS data output
V_{ref}	3	reference voltage output (0.5 V_{DDA})
MPX	4	multiplex input signal
V_{DDA}	5	+5V supply voltage for analog part
V_{SSA}	6	ground for analog part (0V)
CIN	7	subcarrier input to comparator
SCOUT	8	subcarrier output for reconstruction filter
TCTR	9	test control
TEN	10	test enable
V_{SSD}	11	ground for digital part (0V)
V_{DDD}	12	+5V supply voltage for digital part
OSCI	13	oscillator input
OSCO	14	oscillator output
T57	15	57kHz clock signal output
RDCL	16	RDS clock output

BC847B / BFS19

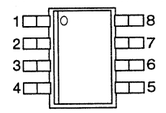


BD438



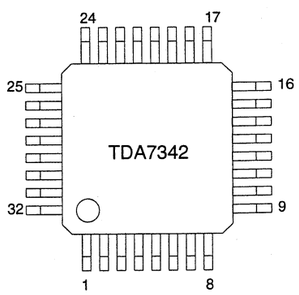
MC4558 Dual op amp

PIN	DESCRIPTION
1	Output 1
2	Inverting input 1
3	Non inverting input 1
4	Vcc -
5	Non inverting input 2
6	Inverting input 2
7	Output 2
8	Vcc +



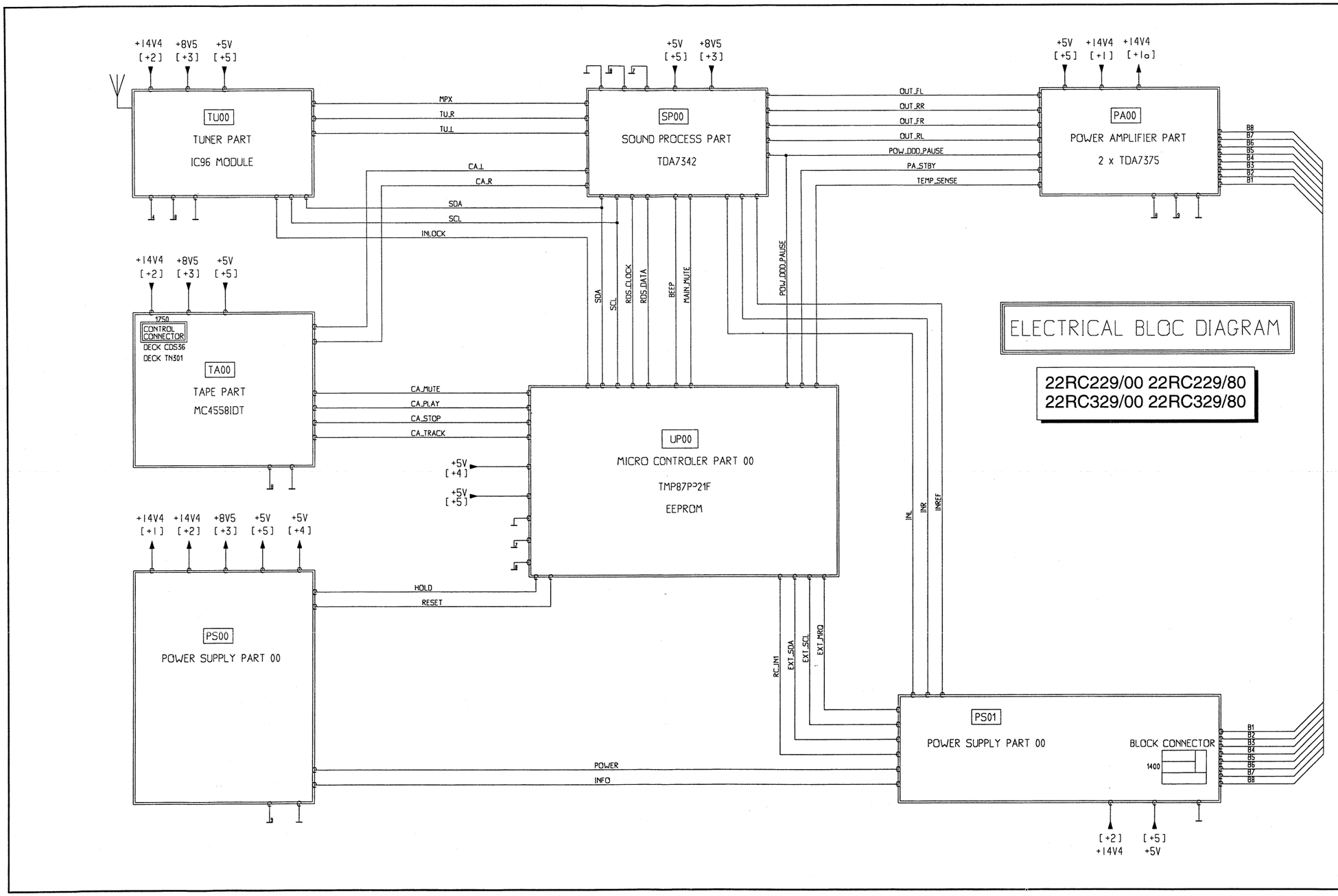
TDA7342 Digitally controlled audio processor

SYMBOL	PIN	DESCRIPTION	SYMBOL	PIN	DESCRIPTION
TR R	1	Treble control capacitor right	BIN L	17	Bass control input left
IN R	2	Input right	BOUT L	18	Bass control output left
OUT R	3	Output right	BIN R	19	Bass control input right
LOUD R	4	Input loudness, right control part	BOUT R	20	Bass control output right
IN R3	5	Input 3 right source (CD)	SM	21	Soft mute control
IN R2	6	Input 2 right source	OUT RR	22	Output rear right
IN R1	7	Input 1 right source	OUT LR	23	Output left right
MONO	8	Input mono source	OUT RF	24	Output right front
LOUD L	9	Input loudness, left control part	OUT LF	25	Output left front
CD GND	10	Ground input CD	DIG GND	26	Bus ground
IN L3	11	Input 3 left source (CD)	SDA		I2C Data
IN L2	12	Input 2 left source	SCL	28	I2C Clock
IN L1	13	Input 1 left source	CREF	29	Supply reference capacitor
CSM	14	Soft mute control capacitor	Vs	30	Supply voltage
IN L	15	Input right	GND	31	Ground
OUT L	16	Output left	TRL	32	Treble control capacitor left



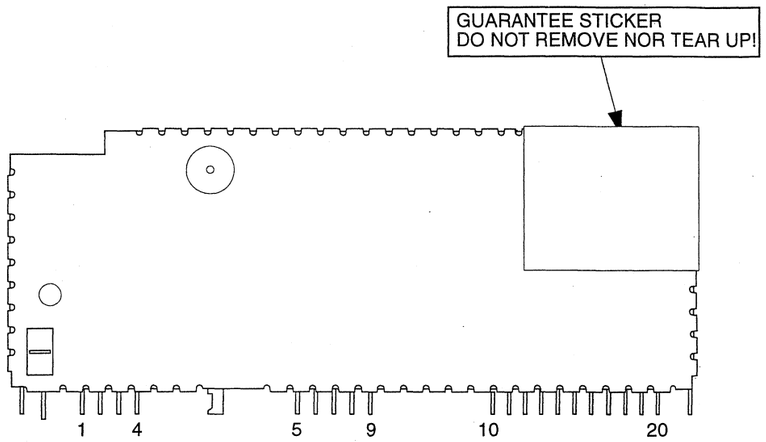
ELECTRICAL BLOC DIAGRAM

22RC229/00 22RC229/80
22RC329/00 22RC329/80



IC96 MODULE

Not reparable module. Do not open and do not try to repair yourself!



Connections

2 Ground

5 Inlock detector pin
6 Vcc 8.5V
7 Ground
8 Vcc 5.0V

10 Multiplex / RDS output signal

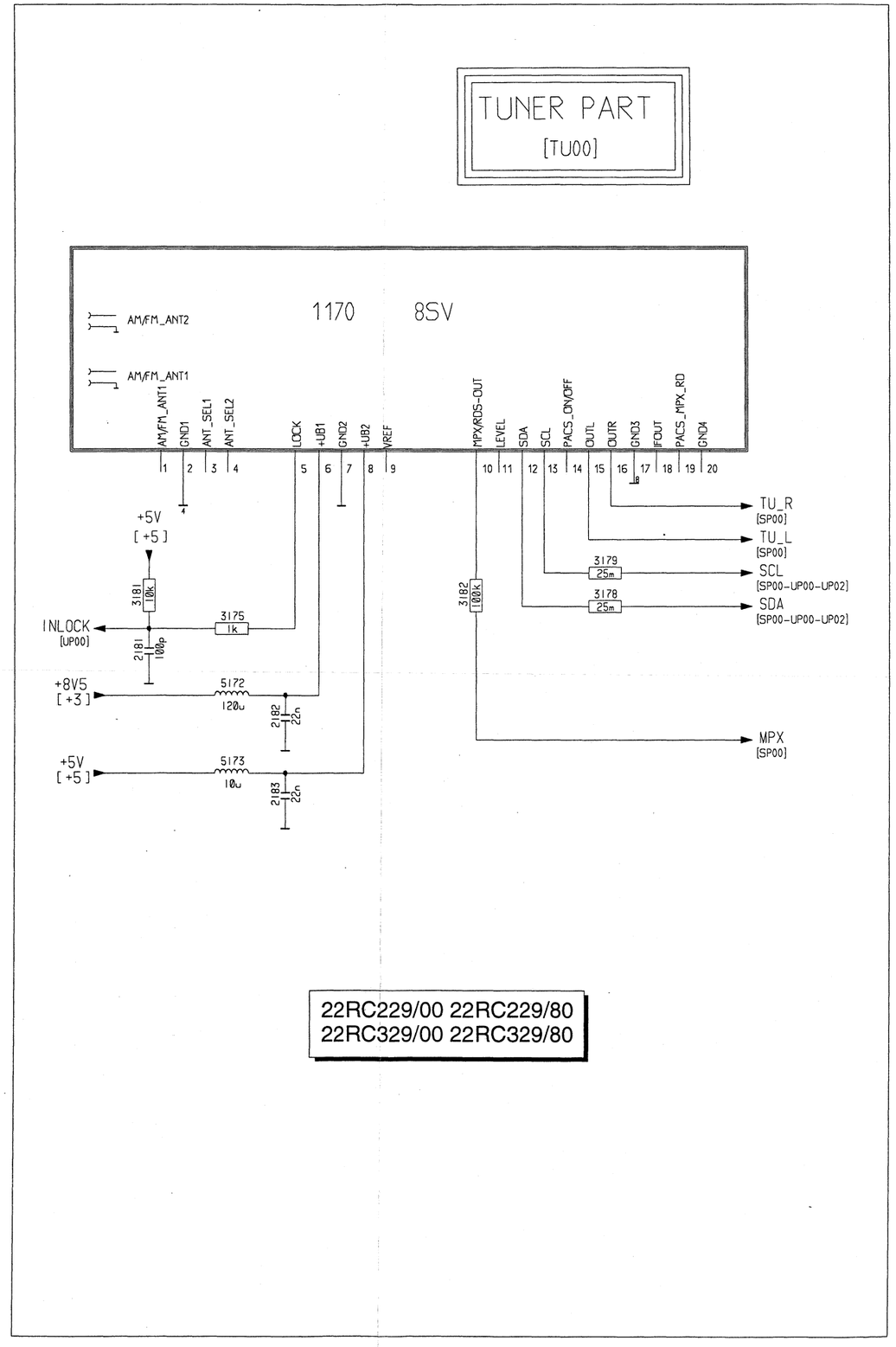
12 I^2C SDA
13 I^2C SCL

15 tuner output L
16 tuner output R
17 Ground

Quick reference data:

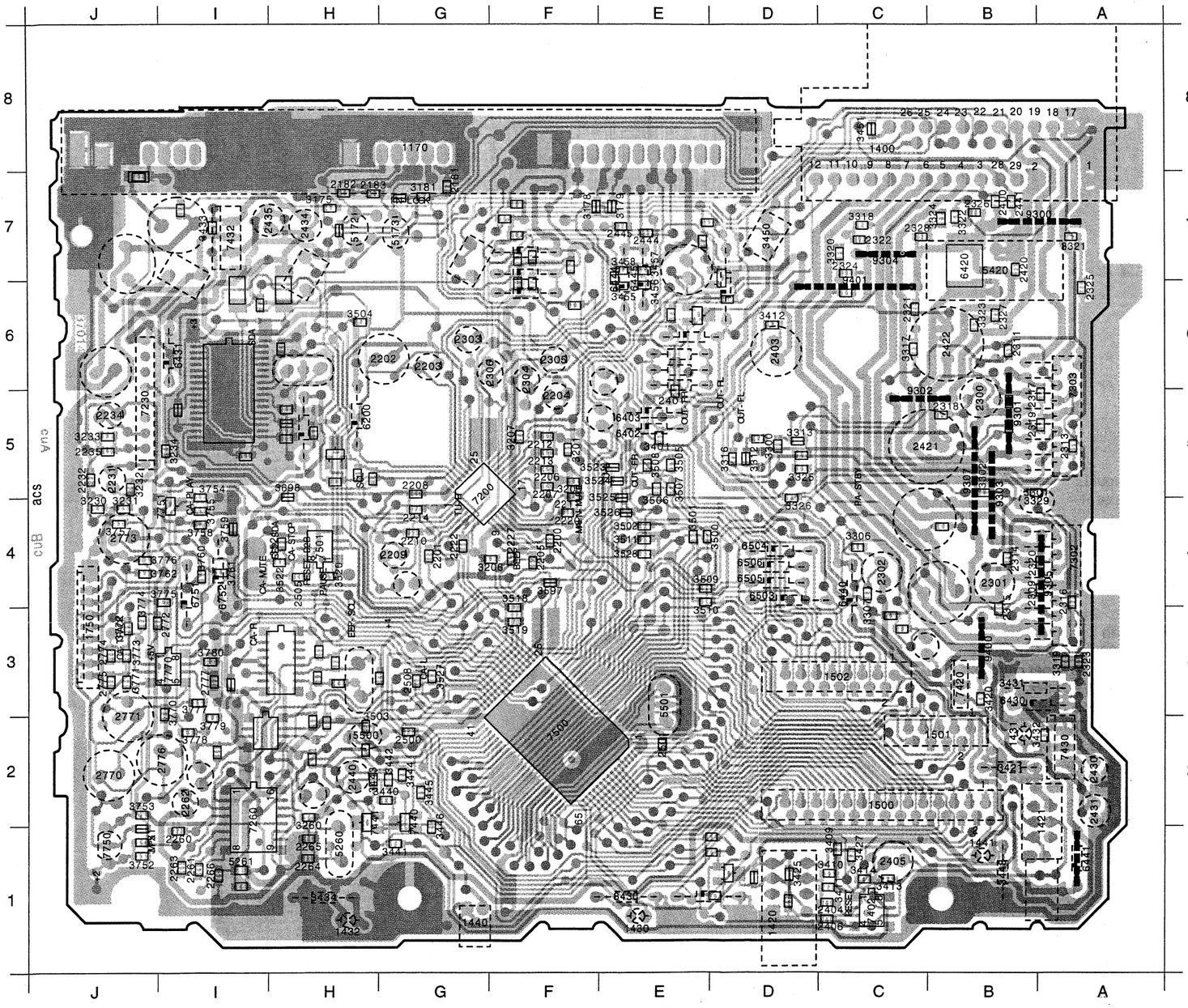
1) AM part
- -Longwave/Mediumwave 144-1710 KHz (inclusive USA)
- -Shortwave 5850-6250 KHz - 49 meter band
- -AM double super concept
- -AM IF1 10.7MHz
- -AM IF2 450KHz
- -First VCO frequency above input signal frequency
- -Second X-tal oscillator frenquency below IF1
- -Usable sensivity α26dB MW = 14μV typ.

1) FM part
- -FM 87.5 - 108MHz
- -FM double super concept
- -FM IF1 72.2MHz
- -FM IF2 10.7MHz
- -First VCO frequency above input signal frequency
- -Second X-tal oscillator frequency below IF1
- -Usable sensivity α26dB =2.5μV typ.
- -THD 1mV δf=75KHz = 0.5% typ
- -Signal to noise ratio = 65dB typ
- -Locktime synthetizer <2mSec



22RC229/00 22RC229/80
22RC329/00 22RC329/80

1170 G 8	1440 G 1	2203 G 6	2301 B 4	2405 C 2	2440 H 2	3430 E 1	5260 H 2	6430 A 3	6504 D 4	7303 A 6	9302 C 6
1400 B 8	1441 B 2	2204 F 6	2302 C 4	2421 C 5	2770 J 2	3431 B 3	5420 B 7	6431 I 6	6505 D 4	7420 B 3	9303 B 5
1420 D 1	1500 C 2	2209 G 4	2303 G 6	2422 B 6	2771 J 3	3434 H 1	5500 H 3	6440 C 4	6506 D 4	7430 A 3	9304 C 7
1421 A 2	1501 B 3	2231 J 5	2304 F 6	2430 A 2	2773 J 5	3448 B 2	5501 E 3	6441 A 2	6751 I 4	7432 I 7	9305 A 4
1430 E 1	1502 C 3	2234 J 6	2305 F 6	2431 A 2	2776 I 3	3450 D 7	6200 H 6	6444 E 7	6752 I 4	7750 J 2	9307 B 5
1431 B 3	1750 J 4	2262 I 2	2306 F 6	2434 H 7	3329 B 5	5172 H 7	6402 E 6	6445 E 7	7230 J 6	9300 A 7	9400 B 4
1432 H 1	2202 G 6	2300 B 6	2403 D 6	2435 I 7	3421 B 2	5173 G 7	6403 E 6	6503 D 4	7302 A 4	9301 B 6	9401 C 7

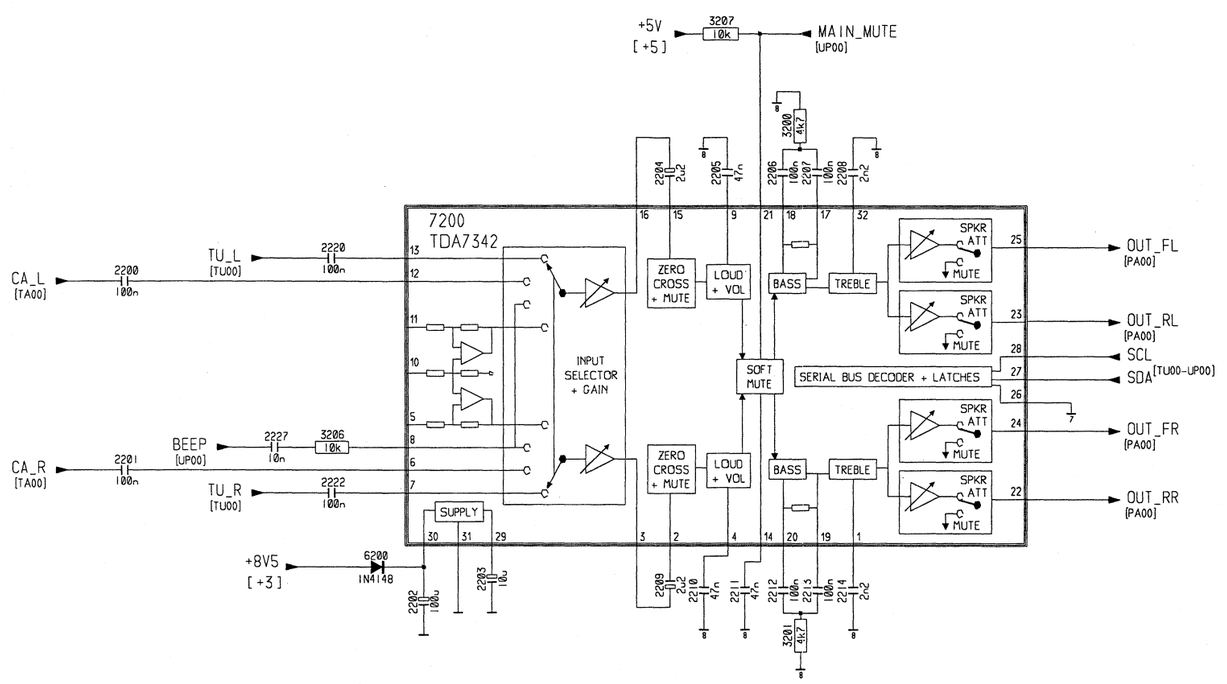


22RC229/00 22RC229/80
22DC329/00 22DC329/80

2181 G 8	3307 C 4	3773 J 4
2182 H 8	3312 D 5	3774 J 4
2183 H 8	3313 D 5	3775 I 4
2200 F 5	3316 D 5	3776 J 4
2201 G 4	3317 C 6	3777 I 3
2205 F 4	3318 C 7	3778 I 3
2206 F 5	3319 A 3	3779 I 3
2207 F 5	3320 C 7	3780 I 3
2208 G 5	3321 A 7	5261 I 2
2210 G 5	3322 B 8	6420 B 7
2211 F 5	3323 B 7	7200 G 5
2212 F 6	3324 B 8	7260 I 2
2213 F 5	3325 D 5	7402 C 1
2214 G 5	3326 D 5	7440 G 2
2220 F 5	3401 E 5	7441 H 2
2222 G 5	3409 C 2	7500 F 3
2227 F 4	3410 C 2	7501 H 5
2232 J 5	3411 C 1	7751 I 5
2235 J 5	3412 D 7	7770 I 3
2260 I 2	3413 C 1	
2261 I 2	3414 C 1	
2263 I 2	3420 B 3	
2264 H 2	3425 D 1	
2265 H 2	3427 C 2	
2266 I 1	3432 A 3	
2309 A 4	3433 I 7	
2311 B 6	3440 G 2	
2313 A 5	3441 G 2	
2314 B 4	3442 G 2	
2315 B 4	3443 H 2	
2316 A 4	3444 G 2	
2317 A 6	3445 G 2	
2318 B 6	3446 G 2	
2319 A 6	3451 C 8	
2320 A 4	3455 E 7	
2321 C 7	3456 E 7	
2322 C 7	3457 E 7	
2323 A 3	3458 E 7	
2324 C 7	3500 E 5	
2325 A 7	3501 E 5	
2326 B 8	3502 E 5	
2327 B 7	3503 H 3	
2328 C 7	3504 H 7	
2400 B 8	3505 E 5	
2401 E 6	3506 E 5	
2404 C 1	3507 E 5	
2406 C 1	3508 E 5	
2420 B 7	3509 E 4	
2441 B 8	3510 E 4	
2444 E 7	3511 E 5	
2445 E 7	3518 F 4	
2500 G 3	3519 F 4	
2501 E 3	3520 H 4	
2505 H 4	3521 H 5	
2508 G 3	3522 H 4	
2772 J 4	3523 E 5	
2774 J 4	3524 E 5	
2775 J 3	3525 E 5	
2777 I 3	3526 E 5	
3175 H 8	3527 G 3	
3178 F 8	3528 E 4	
3179 E 8	3597 F 4	
3181 G 8	3698 H 5	
3200 F 5	3751 J 2	
3201 F 5	3752 J 2	
3206 F 4	3753 J 2	
3207 F 6	3754 I 5	
3230 J 5	3755 I 5	
3231 J 5	3757 J 5	
3232 J 5	3758 I 5	
3233 J 6	3759 I 5	
3234 I 5	3760 I 4	
3260 H 2	3761 I 4	
3300 D 5	3762 J 4	
3301 B 5	3770 I 3	
3302 B 5	3771 J 3	
3306 C 4	3772 J 4	

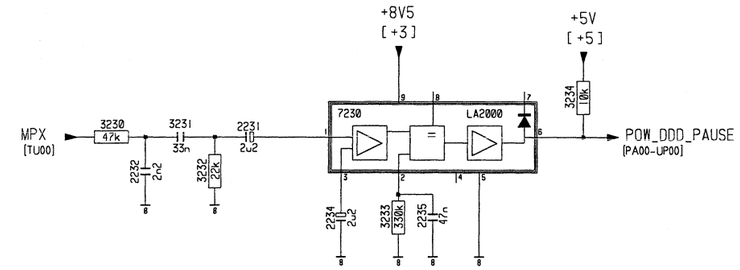
SOUND PROCESS PART [SP00]

22RC229/00 22RC229/80
22RC329/00 22RC329/80



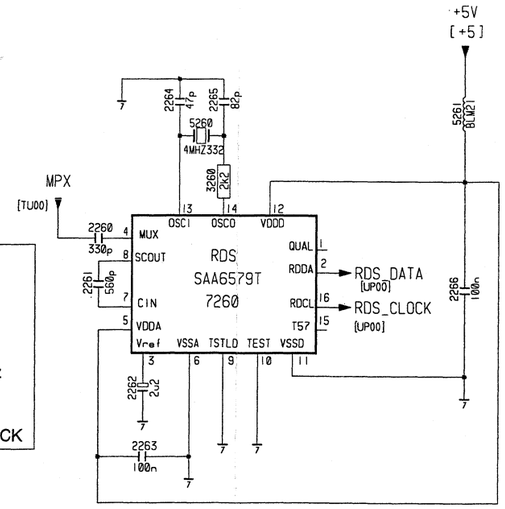
7200 TDA7342

1 = 4.0V	17 = 4.0V
2 = 4.0V	18 = 4.0V
3 = 4.0V	19 = 4.0V
4 = 4.0V	20 = 4.0V
5 = 4.0V	21 = 5.0V
6 = 4.0V	22 = 3.3V
7 = 4.0V	23 = 3.3V
8 = 4.0V	24 = 3.3V
9 = 4.0V	25 = 3.3V
10 = N.C.	26 = GND
11 = N.C.	27 = 5.0V
12 = 4.0V	28 = 5.0V
13 = 4.0V	29 = 4.0V
14 = 7.2V	30 = 7.9V
15 = 4.0V	31 = GND
16 = 4.0V	32 = 4.0V



7230 LA2000

1 = 1.9V	5 = GND
2 =	6 = 5.1V
3 = 2.0V	0.0V PAUSE
4 = N.C.	7 = N.C.
	8 = N.C.



7260 SAA6579T

1 = N.C.	9 = GND
2 = RDS DATA	10 = GND
3 = 2.5V	11 = GND
4 = 2.5V	12 = 5.0V
5 = 5.0V	13 = 4.332MHz
6 = GND	14 = 2.5V
7 = 2.5V	15 = N.C.
8 = 2.6V	16 = RDS CLOCK

2200 C 4
2201 D 4
2202 F 6
2203 E 7
2204 B 8
2205 B 9
2206 B 9
2207 B10
2208 B10
2209 E 8
2210 E 9
2211 E 9
2212 E 9
2213 E10
2214 E10
2220 B 5
2222 E 5
2227 D 5
2231 H 4
2232 I 4
2234 I 5
2235 I 6
2260 I13
2261 I13
2262 J13
2263 K13
2264 H13
2265 H14
2266 I16
3200 A 9
3201 F 9
3206 D 5
3207 A 9
3230 H 3
3231 H 4
3232 I 4
3233 I 6
3234 H 7
3260 H14
5260 H14
5261 H16
6200 E 6
7200 B 6
7230 H 5
7260 I14

POWER SUPPLY PART
[PS00]

22RC229/00 22RC229/80
22RC329/00 22RC329/80

1400
POWER
INFO
B5
B4
B3
B1
B2
B8
B7
B6
RC-I
RC-IN1 (UP00)
+ANTENNA
+14V4 [+1]
+14V4 [+2]
+14V4 [+PERM]
+14V4 [+Ia]
+5V [+4]
+5V [+5]
+8V5 [+3]
RESET (UP00)
HOLD (UP00)
PREREGULATOR 7V
REGULATOR
REF
RESET
SENSE
L4949ND
7402
FRONT
ON/OFF
SFR16
BC847B
BD438
BD241A
BD241C
BZX55-F5V6
BZX79-B9V1

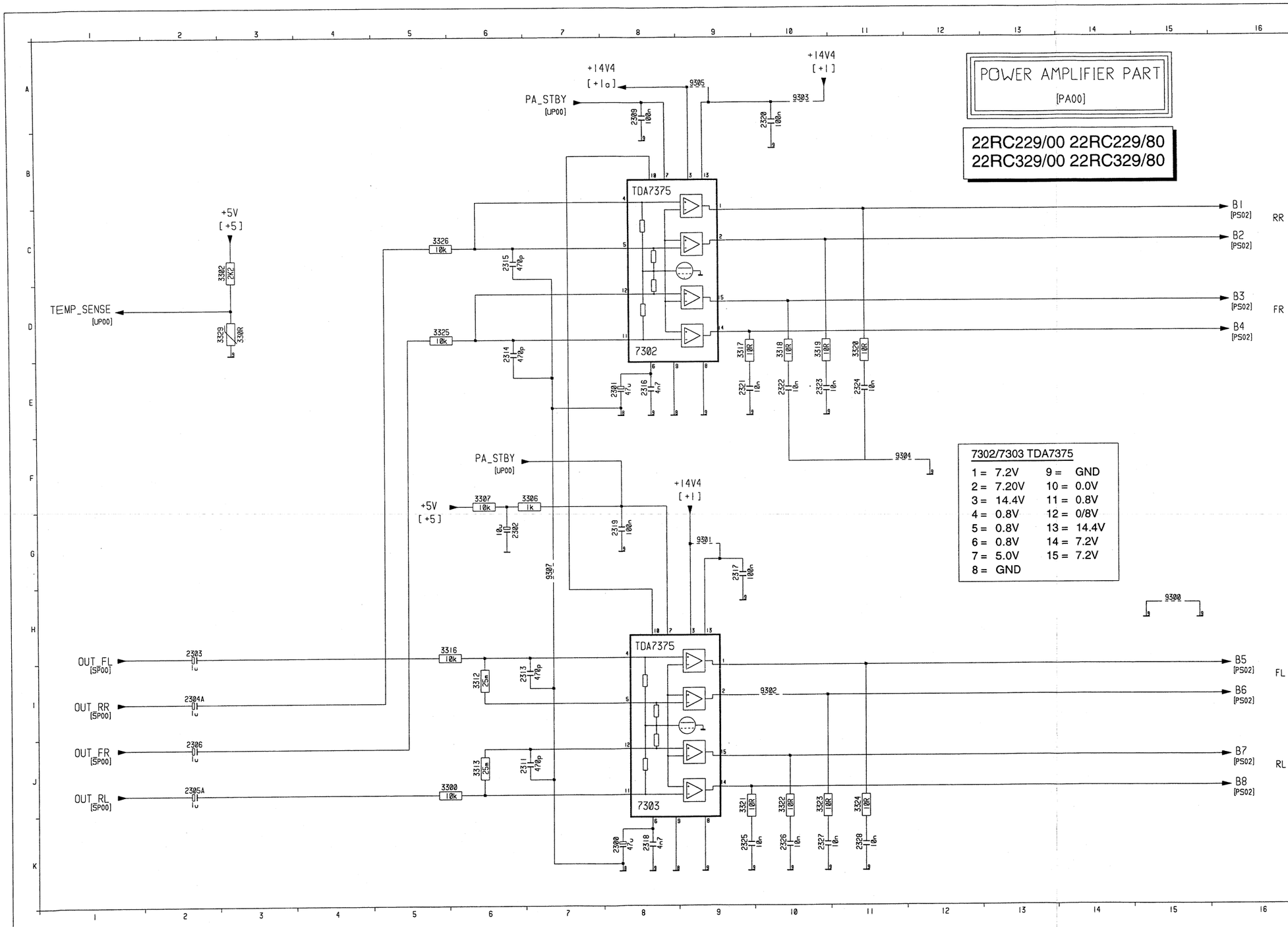
7402 L4949ND	
1 = 14.4V	5 = GND
2 = 2.0V	6 = 5.0V
3 = 5.0V	7 = 5.0V
4 = 2.3V	8 = 5.0V

1400	A	1
1420	G	11
1421	H	11
1430	D	14
1431	C	14
1432	D	14
1440	E	12
1441	I	7
2400	B	3
2401	B	4
2403	B	7
2404	B	8
2405	A	8
2406	B	8
2420	B	3
2421	B	3
2422	B	4
2430	H	14
2431	G	15
2434	J	14
2435	I	15
2440	E	10
2441	K	7
2444	I	3
2445	I	5
3401	B	3
3409	C	5
3410	C	6
3411	C	6
3412	B	6
3413	B	10
3414	C	10
3420	I	9
3421	I	10
3425	G	9
3427	H	11
3430	E	14
3431	D	14
3432	G	14
3433	I	14
3434	E	14
3440	D	10
3441	D	10
3442	E	11
3443	D	11
3444	E	12
3445	E	12
3446	E	12
3448	J	7
3450	K	8
3451	J	2
3455	H	4
3456	I	3
3457	I	4
3458	I	4
5420	A	3
6402	B	5
6403	B	6
6420	B	4
6430	H	14
6431	I	14
6444	H	4
6445	I	4
7402	C	8
7420	I	9
7430	G	14
7432	I	14
7440	E	11
7441	D	12
9400	H	9
9401	F	14
9410	I	7

POWER AMPLIFIER PART

[PA00]

22RC229/00 22RC229/80
22RC329/00 22RC329/80



7302/7303 TDA7375

1 = 7.2V	9 = GND
2 = 7.20V	10 = 0.0V
3 = 14.4V	11 = 0.8V
4 = 0.8V	12 = 0/8V
5 = 0.8V	13 = 14.4V
6 = 0.8V	14 = 7.2V
7 = 5.0V	15 = 7.2V
8 = GND	

2300 K 8
2301 E 8
2302 G 6
2303 H 2
2304 I 2
2305 J 2
2306 J 2
2309 A 8
2311 J 6
2313 I 6
2314 D 6
2315 C 6
2316 E 8
2317 G 9
2318 K 8
2319 G 8
2320 AI0
2321 E 9
2322 EI0
2323 EI0
2324 EI1
2325 K 9
2326 KI0
2327 KI0
2328 KI1
3300 J 6
3302 C 3
3306 F 7
3307 F 6
3312 I 6
3313 J 6
3316 H 6
3317 D 9
3318 DI0
3319 DI0
3320 DI1
3321 J 9
3322 JI0
3323 JI0
3324 JI1
3325 D 5
3326 C 5
3329 D 3
7302 D 8
7303 J 8
9300 HI5
9301 G 9
9302 I10
9303 AI0
9304 FI1
9305 A 9
9307 G 7

MICRO CONTROLER PART
[UP00]

22RC229/00 22RC229/80
22RC329/00 22RC329/80

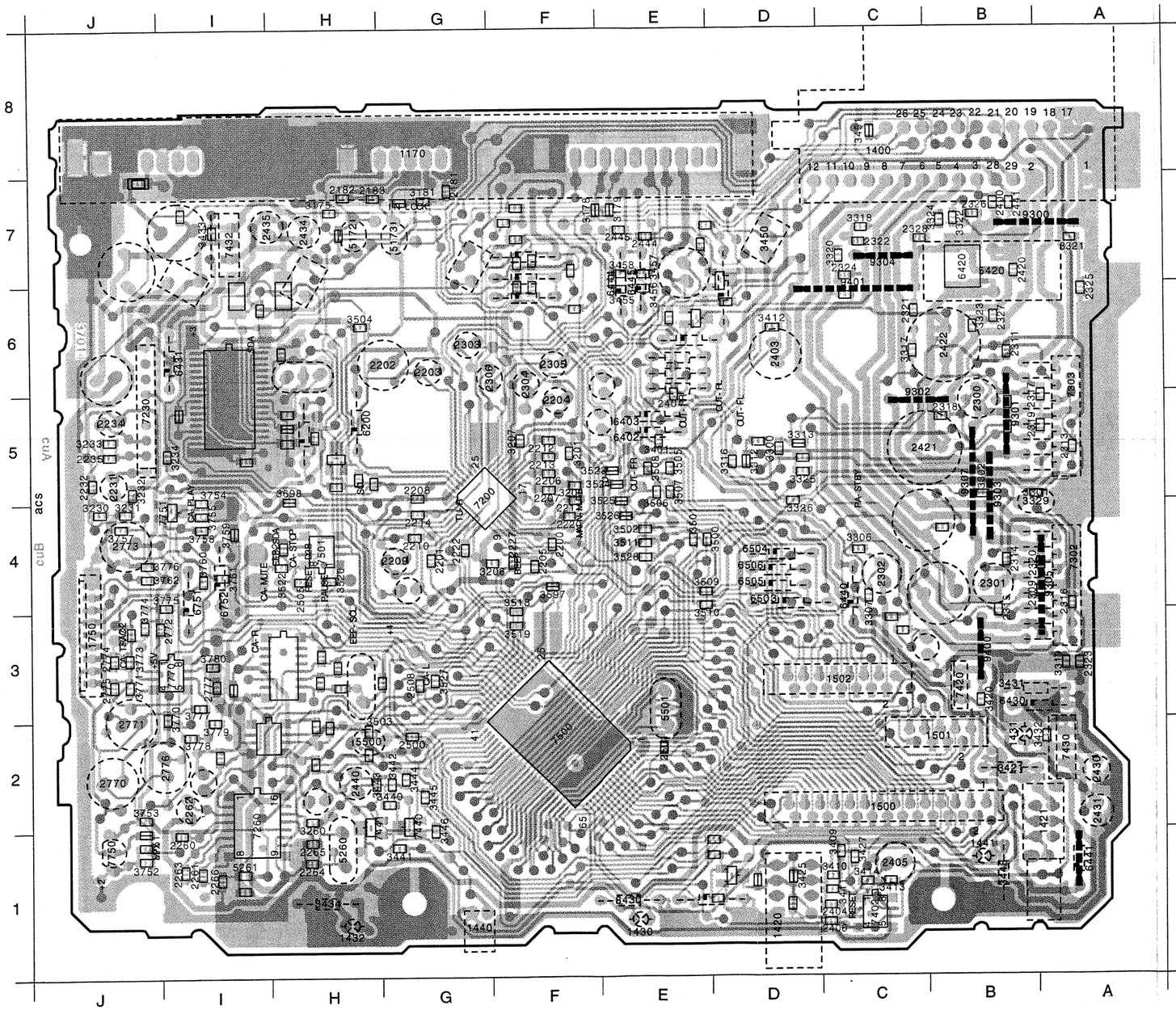
All DC voltages measurd in FM, set tuned unless otherwise stated.

7500 TMP87PP21F

1 = GND	24 = 5.0V
2 = X-TAL out, 8.00MHz	25 = 5.0V
3 = X-TAL in, 8.00MHz	26 = 5.0V
4 = RESET. See diagram	27 = 5.0V
5 = 5.1V	28 = 5.0V
6 = 5.1V	29 = 5.0V
7 = GND	30 = 0.1V cass ON
8 = 5.0V ON - 0.0V OFF	4.4V cass OFF/FFW/FRW
9 = 5.1V	31 = 5.1V
10 = 5.0V - ⎍⎍ when bleep	32 = 5.5V cass ON
11 = 0.0V - 1.1V key pressed	0.0V cass OFF
12 = 0.0V - 1.1V key pressed	33 = 5.1V norm - 0.0V reverse
13 = 0.0V - 1.1V key pressed	35 = 5.1V
14 = 0.0V - 1.1V key pressed	36 = 5.0v
15 = 5.0V	37 = 4.8v
16 = 0.7V	38 = GND
17 = 2.6V	39 = 5.0V
18 = 5.1V	40 = 5.0V
19 = 5.0V locked - ⎍⎍search	77 = GND
20 = SCA RDS	78 = N.C.
21 = 5.0V	79 = N.C.
22 = 5.0V	80 = N.C.
23 = 5.0V	41 to 76 = LCD

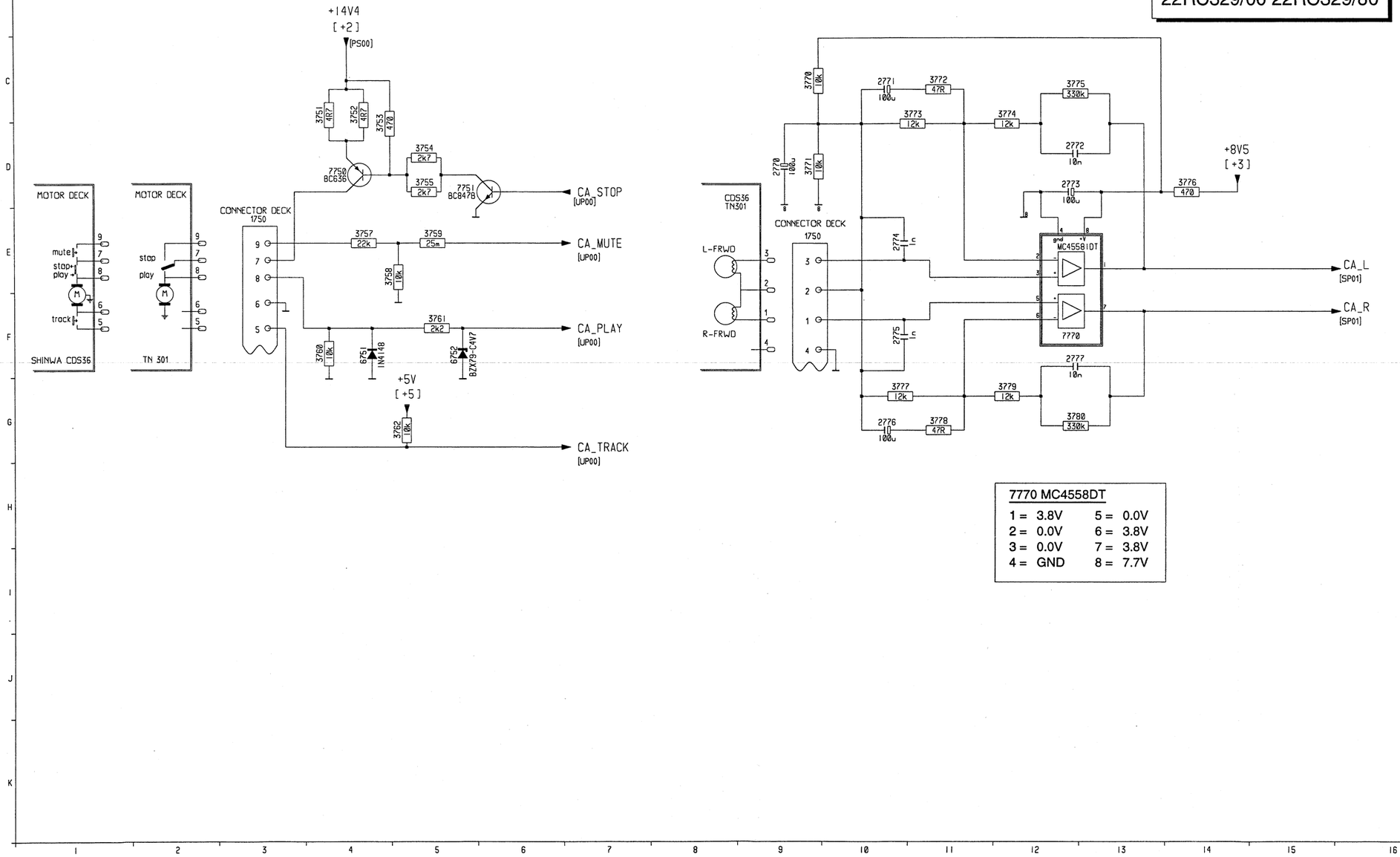
1500 A 4
1500 A 8
1500 A 5
1501 A 6
1501 A 4
1502 H 7
2500 B 2
2501 C 2
2505 C12
2508 E 4
3500 F10
3501 E11
3502 F 8
3503 G 8
3504 F 8
3505 J 6
3506 J 6
3507 J 6
3508 K 6
3509 E 1
3510 E 1
3511 F11
3518 D10
3519 D10
3520 D14
3521 B15
3522 B15
3523 H 6
3524 G 6
3525 G 7
3526 F 7
3527 E 5
3528 F11
3597 F 8
3698 H11
5500 A 1
5501 C 2
6503 I10
6504 I10
6505 J10
6506 K10
7500 B 7
7501 D13

1170 G 8	1440 G 1	2203 G 6	2301 B 4	2405 C 2	2440 H 2	3430 E 1	5260 H 2	6430 A 3	6504 D 4	7303 A 6	9302 C 6
1400 B 8	1441 B 2	2204 F 6	2302 C 4	2421 C 5	2770 J 2	3431 B 3	5420 B 7	6431 I 6	6505 D 4	7420 B 3	9303 B 5
1420 D 1	1500 C 2	2209 G 4	2303 G 6	2422 B 6	2771 J 3	3434 H 1	5500 H 3	6440 C 4	6506 D 4	7430 A 3	9304 C 7
1421 A 2	1501 B 3	2231 J 5	2304 F 6	2430 A 2	2773 J 5	3448 B 2	5501 E 3	6441 A 2	6751 I 4	7432 I 7	9305 A 4
1430 E 1	1502 C 3	2234 J 6	2305 F 6	2431 A 2	2776 I 3	3450 D 7	6200 H 6	6444 E 7	6752 I 4	7750 J 2	9307 B 5
1431 B 3	1750 J 4	2262 I 2	2306 F 6	2434 H 7	3329 B 5	5172 H 7	6402 E 6	6445 E 7	7230 J 6	9300 A 7	9400 B 4
1432 H 1	2202 G 6	2300 B 6	2403 D 6	2435 I 7	3421 B 2	5173 G 7	6403 E 6	6503 D 4	7302 A 4	9301 B 6	9401 C 7



TAPE PART
[TA00]

22RC229/00 22RC229/80
22RC329/00 22RC329/80

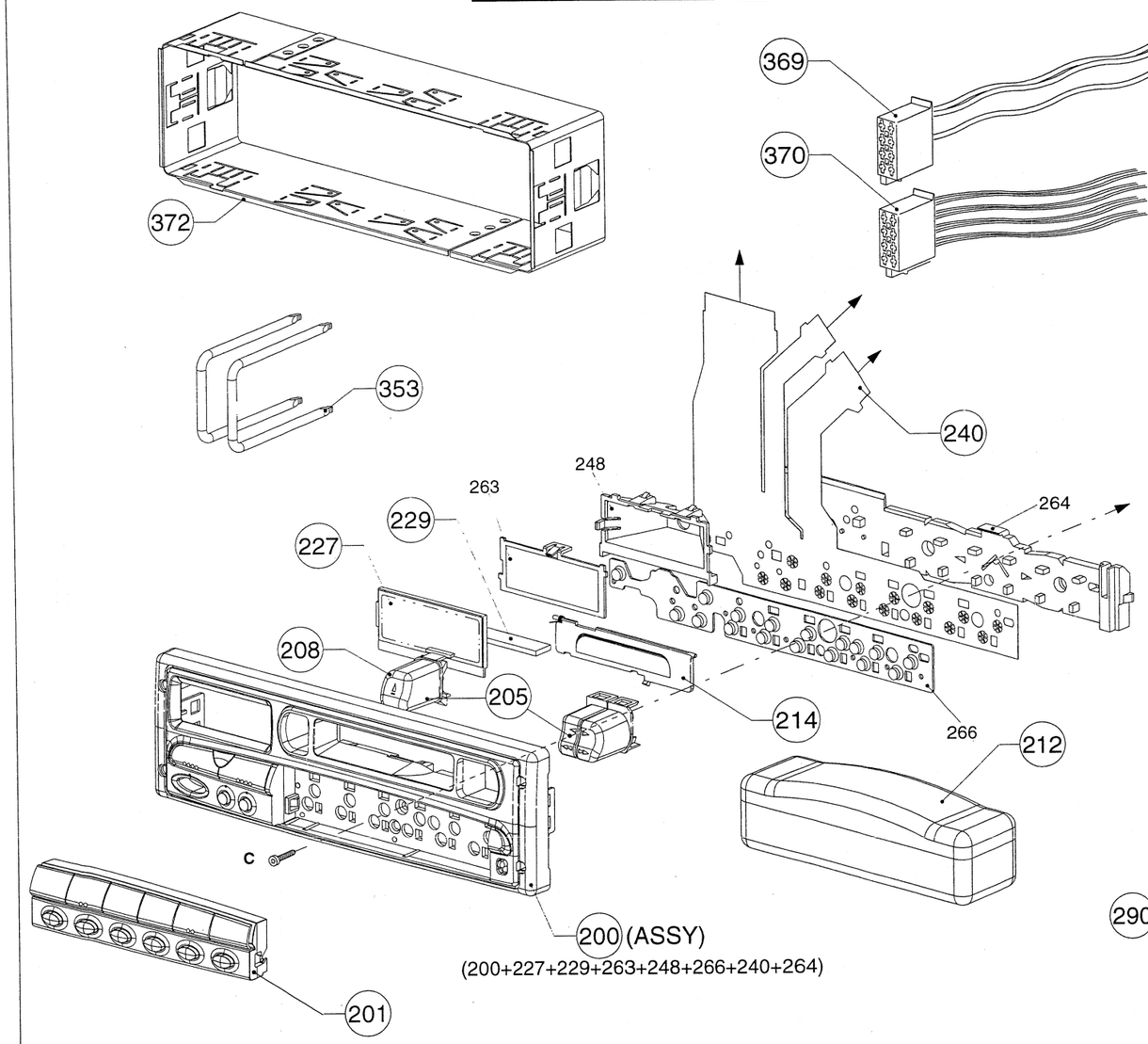


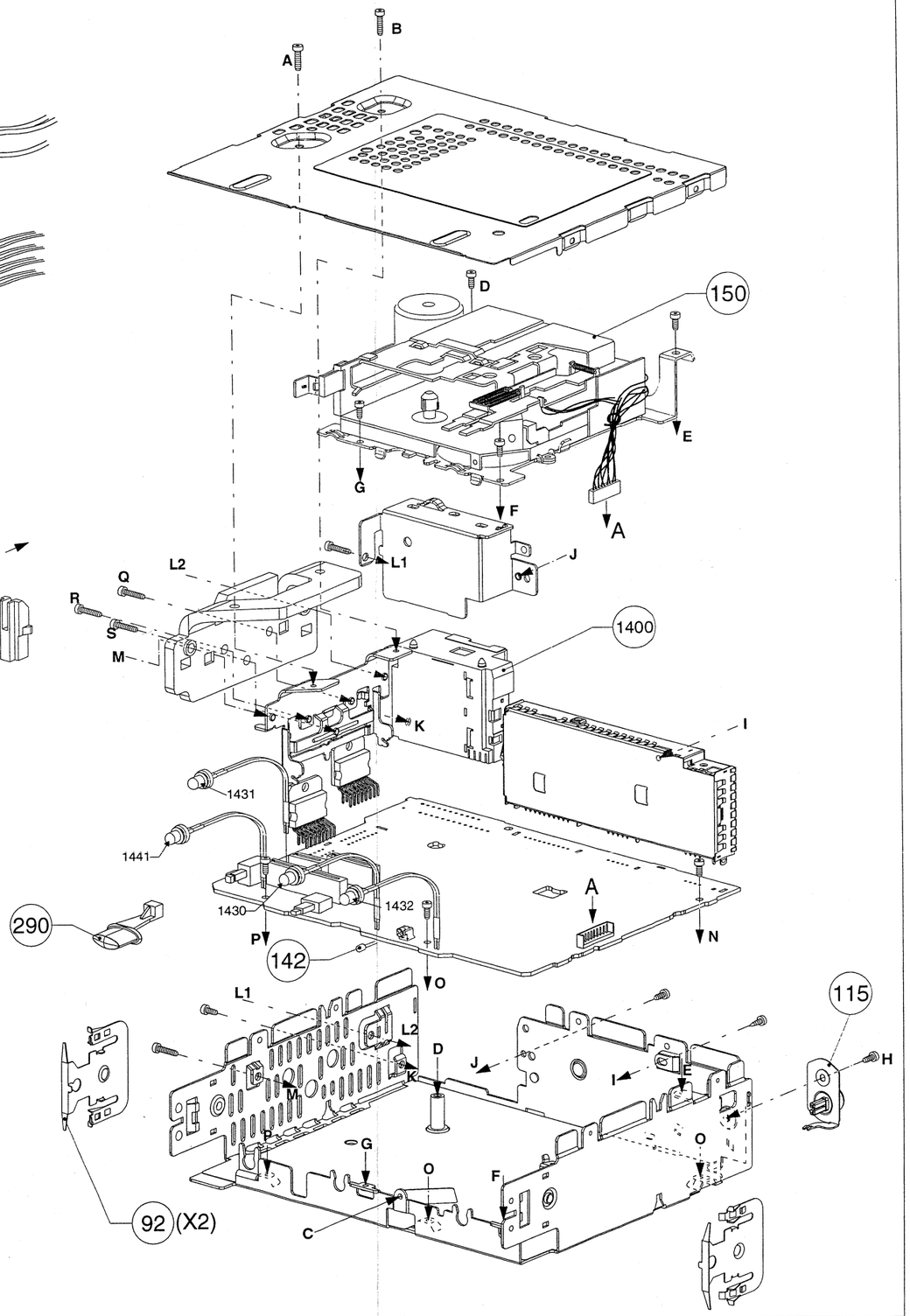
7770 MC4558DT

1 =	3.8V	5 =	0.0V
2 =	0.0V	6 =	3.8V
3 =	0.0V	7 =	3.8V
4 =	GND	8 =	7.7V

1750 E 9
1750 E 3
2770 D 9
A 2771 C10
2772 D12
2773 D12
2774 E10
2775 F10
2776 G10
2777 F12
B 3751 C 4
3752 C 4
3753 D 4
3754 D 5
3755 D 5
3757 E 4
C 3758 E 4
3759 E 5
3760 F 4
3761 F 5
3762 G 5
3770 C 9
D 3771 D 9
3772 C11
3773 C11
3774 C12
3775 C12
3776 D14
E 3777 G10
3778 G11
3779 G12
3780 G12
6751 F 4
6752 F 5
F 7750 D 4
7751 D 5
7770 F12

22RC229/00 22RC229/80
22RC329/00 22RC329/80





92	4822 492 71046	SPRING CLAMPING	214	4822 443 10559	FLAP CASSETTE 22RC229/00 ../80
142	4822 130 83612	BLINKING LED	214	4822 443 10549	FLAP CASSETTE 22RC329/00 ../80
150	4822 701 13941	DECK TN-301NX-265 22RC229/00 ../80	227	4822 135 00056	L.C.D.
150	4822 701 13942	DECK CDS36-PR 22RC329/00 ../80	229	4822 267 10354	ZEBRA CONNECTOR
200	4822 459 04501	FRONT PLATE ASSY 22RC229/00 ../80	240	4822 320 11427	FLEX FOIL
200	4822 459 04479	FRONT PLATE ASSY 22RC329/00 ../80	292	4822 410 10252	POWER BUTTON
201	4822 459 04481	DET-UNIT	353	4822 404 20437	DEMOUNTING BRACKET (X2)
205	4822 410 10366	BUTTON DECK ASSY 22RC329/00 ../80	358	4822 071 25002	FUSE BLADE 5A
208	4822 410 10253	EJECT BUTTON 22RC229/00 ../80	372	4822 443 30463	SLEEVE
212	4822 600 70757	CASE DET. UNIT	375	4822 736 15081	DIRECTIONS FOR USE

Miscellaneous		
1170	4822 210 10741	TUNER IC96 8SV
1400	4822 265 10901	CONNECTOR BLOCK
1420	4822 276 13484	SWI PUSH 2P 1A 25V
1421	4822 276 13483	SWI PUSH 2P 2POS
1430	4822 134 41175	LAMP 80MA 14V T1.25 orange
1430	4822 134 41179	LAMP 80MA 14V T1.25 green
1431	4822 134 41173	LAMP 50MA 14V T1.25 orange
1431	4822 134 41178	LAMP 50MA 14V T1.25 green
1432	4822 134 41175	LAMP 80MA 14V T1.25 orange
1432	4822 134 41179	LAMP 80MA 14V T1.25 green
1441	4822 134 41175	LAMP 80MA 14V T1.25 orange
1441	4822 134 41179	LAMP 80MA 14V T1.25 green
1500	4822 267 60378	CON BM V 27P F 1.25
1501	4822 267 50874	CON BM V 9P F 1.25
1502	4822 267 50915	CON BM V 15P F 1.25

2181	5322 122 32531	0805 NPO 50V 100P 5%
2182	5322 122 32654	0805 X7R 50V 22NF 10%
2183	5322 122 32654	0805 X7R 50V 22NF 10%
2200	4822 126 13196	0805 X7R 25V 100NF 10%
2201	4822 126 13196	0805 X7R 25V 100NF 10%
2202	4822 124 11952	ELCAP KS 16V S 100UF 20%
2203	4822 124 41017	ELCAP KS 16V S 10UF 20%
2204	4822 124 23504	ELCAP KS 50V S 2.2UF 20%
2205	4822 126 13343	0805 X7R 25V 47NF 10%
2206	4822 126 13196	0805 X7R 25V 100NF 10%
2207	4822 126 13196	0805 X7R 25V 100NF 10%
2208	4822 122 33127	0805 X7R 50V 2.2NF 10%
2209	4822 124 23504	ELCAP KS 50V S 2.2UF 20%
2210	4822 126 13343	0805 X7R 25V 47NF 10%
2211	4822 126 13343	0805 X7R 25V 47NF 10%
2212	4822 126 13196	0805 X7R 25V 100NF 10%
2213	4822 126 13196	0805 X7R 25V 100NF 10%
2214	4822 126 13196	0805 X7R 25V 100NF 10%
2222	4822 126 13196	0805 X7R 25V 100NF 10%
2227	5322 122 34098	0805 X7R 50V 10NF 10%
2231	4822 124 23504	ELCAP KS 50V S 2.2UF 20%
2232	4822 122 33127	0805 X7R 50V 2.2NF 10%
2234	4822 124 23504	ELCAP KS 50V S 2.2UF 20%
2235	4822 126 13343	0805 X7R 25V 47NF 10%
2260	5322 122 31863	0805 NPO 50V 330PF 5%
2261	5322 116 80853	0805 NPO 50V 560PF 5%
2262	4822 124 23504	ELCAP KS 50V S 2.2UF 20%
2263	4822 126 13196	0805 X7R 25V 100NF 10%
2264	5322 122 32452	0805 NPO 50V 47PF 5%
2265	4822 122 33515	0805 NPO 50V 82PF 5%
2266	4822 126 13196	0805 X7R 25V 100NF 10%
2300	4822 124 22646	ELCAP KS 16V S 47UF 20%
2301	4822 124 22646	ELCAP KS 16V S 47UF 20%
2302	4822 124 41017	ELCAP KS 16V S 10UF 20%
2303	4822 124 23282	ELCAP KS 50V S 1UF 20%
2304	4822 124 23282	ELCAP KS 50V S 1UF 20%
2305	4822 124 23282	ELCAP KS 50V S 1UF 20%
2306	4822 124 23282	ELCAP KS 50V S 1UF 20%
2309	4822 126 13196	0805 X7R 25V 100NF 10%
2311	5322 122 32268	0805 NPO 50V 470PF 5%
2313	5322 122 32268	0805 NPO 50V 470PF 5%
2314	5322 122 32268	0805 NPO 50V 470PF 5%
2315	5322 122 32268	0805 NPO 50V 470PF 5%
2316	5322 126 10223	0805 X7R 50V 4.7NF 10%
2317	4822 126 13196	0805 X7R 25V 100NF 10%
2318	5322 126 10223	0805 X7R 50V 4.7NF 10%
2319	4822 126 13196	0805 X7R 25V 100NF 10%
2320	4822 126 13196	0805 X7R 25V 100NF 10%
2321	5322 122 34098	0805 X7R 50V 10NF 10%
2322	5322 122 34098	0805 X7R 50V 10NF 10%
2323	5322 122 34098	0805 X7R 50V 10NF 10%
2324	5322 122 34098	0805 X7R 50V 10NF 10%
2325	5322 122 34098	0805 X7R 50V 10NF 10%
2326	5322 122 34098	0805 X7R 50V 10NF 10%
2327	5322 122 34098	0805 X7R 50V 10NF 10%
2328	5322 122 34098	0805 X7R 50V 10NF 10%
2400	5322 122 32531	0805 NPO 50V 100P 5%
2401	5322 122 34098	0805 X7R 50V 10NF 10%
2403	4822 124 11952	ELCAP KS 16V S 100UF 20%
2404	4822 126 13196	0805 X7R 25V 100NF 10%
2405	4822 124 22646	ELCAP KS 16V S 47UF 20%
2406	4822 126 13196	0805 X7R 25V 100NF 10%
2420	5322 122 32531	0805 NPO 50V 100P 5%
2421	4822 124 80769	ELCAP VZ 16V 2200UF 20%
2422	4822 124 80769	ELCAP VZ 16V 2200UF 20%
2430	4822 124 41017	ELCAP KS 16V S 10UF 20%
2431	4822 124 23279	ELCAP KS 16V S 22UF 20%
2434	4822 124 23279	ELCAP KS 16V S 22UF 20%
2435	4822 124 23279	ELCAP KS 16V S 22UF 20%
2440	4822 124 23279	ELCAP KS 16V S 22UF 20%
2441	5322 122 32531	0805 NPO 50V 100P 5%
2444	5322 122 34098	0805 X7R 50V 10NF 10%
2445	4822 126 13343	0805 X7R 25V 47NF 10%
2500	5322 122 32654	0805 X7R 50V 22NF 10%
2501	5322 122 34098	0805 X7R 50V 10NF 10%
2505	5322 122 32654	0805 X7R 50V 22NF 10%
2508	5322 122 34123	0805 X7R 50V 1NF 10%
2770	4822 124 11952	ELCAP KS 16V S 100UF 20%
2771	4822 124 11952	ELCAP KS 16V S 100UF 20%
2772	5322 122 34098	0805 X7R 50V 10NF 10%
2773	4822 124 11952	ELCAP KS 16V S 100UF 20%
2774	5322 122 34123	0805 X7R 50V 1NF 10%
2775	5322 122 34123	0805 X7R 50V 1NF 10%
2776	4822 124 11952	ELCAP KS 16V S 100UF 20%
2777	5322 122 34098	0805 X7R 50V 10NF 10%
3231	4822 122 33342	0805 X7R 50V 33NF 10%

3175	4822 051 20102	1K 5% 0805 RC11
3178	4822 051 20008	0R00 MAX 0R05 0805
3179	4822 051 20008	0R00 MAX 0R05 0805
3181	4822 117 10833	10K 5% 0805 RC11
3182	4822 051 20104	100K 5% 0805 RC11
3200	4822 051 20472	4.7K 5% 0805 RC11
3201	4822 051 20472	4.7K 5% 0805 RC11
3206	4822 117 10833	10K 5% 0805 RC11
3207	4822 117 10833	10K 5% 0805 RC11
3230	4822 051 20473	47K 5% 0805 RC11
3232	4822 051 20223	22K 5% 0805 RC11
3233	4822 051 20334	330K 5% 0805 RC11
3234	4822 117 10833	10K 5% 0805 RC11
3260	4822 117 11449	2.2K 5% 0805 RC11
3300	4822 117 10833	10K 5% 0805 RC11
3302	4822 117 11449	2.2K 5% 0805 RC11

3306	4822 051 20102	1K 5% 0805 RC11
3307	4822 117 10833	10K 5% 0805 RC11
3312	4822 051 20008	0R00 MAX 0R05 0805
3313	4822 051 20008	0R00 MAX 0R05 0805
3316	4822 117 10833	10K 5% 0805 RC11
3317	4822 051 20109	10R 5% 0805 RC11
3318	4822 051 20109	10R 5% 0805 RC11
3319	4822 051 20109	10R 5% 0805 RC11
3320	4822 051 20109	10R 5% 0805 RC11
3321	4822 051 20109	10R 5% 0805 RC11
3322	4822 051 20109	10R 5% 0805 RC11
3323	4822 051 20109	10R 5% 0805 RC11
3324	4822 051 20109	10R 5% 0805 RC11
3325	4822 117 10833	10K 5% 0805 RC11
3326	4822 117 10833	10K 5% 0805 RC11
3329	4822 116 40254	PTC 330R 16V S PTH9 DC
3401	4822 051 20229	22R 5% 0805 RC11
3409	4822 051 20104	100K 5% 0805 RC11
3410	4822 051 20333	33K 5% 0805 RC11
3411	4822 051 20333	33K 5% 0805 RC11
3412	4822 051 20229	22R 5% 0805 RC11
3413	4822 051 20473	47K 5% 0805 RC11
3414	4822 051 20473	47K 5% 0805 RC11
3420	4822 117 11449	2.2K 5% 0805 RC11
3421	4822 116 83883	470R 5% SFR16
3425	4822 051 20008	0R00 MAX 0R05 0805
3427	4822 051 20473	47K 5% 0805 RC11
3430	4822 116 52176	10R 5% SFR16
3431	4822 116 52176	10R 5% SFR16
3432	4822 117 11449	2.2K 5% 0805 RC11
3433	4822 051 20681	680R 5% 0805 RC11
3434	4822 116 52176	10R 5% SFR16
3440	4822 051 20334	330K 5% 0805 RC11
3441	4822 051 20223	22K 5% 0805 RC11
3442	4822 117 11383	12K 5% 0805 RC11
3443	4822 051 20273	27K 5% 0805 RC11
3444	4822 117 11449	2.2K 5% 0805 RC11
3445	4822 117 11383	12K 5% 0805 RC11
3446	4822 117 11449	2.2K 5% 0805 RC11
3448	4822 116 52176	10R 5% SFR16
3450	4822 116 40267	PTC 3.3R 25% 20V
3451	4822 051 20008	0R00 MAX 0R05 0805
3455	4822 051 20331	330R 5% 0805 RC11
3456	4822 051 20101	100R 5% 0805 RC11
3457	4822 051 20101	100R 5% 0805 RC11
3458	4822 051 20102	1K 5% 0805 RC11
3500	4822 117 10833	10K 5% 0805 RC11
3501	4822 117 10833	10K 5% 0805 RC11
3502	4822 117 10833	10K 5% 0805 RC11
3503	4822 117 10833	10K 5% 0805 RC11
3504	4822 117 10833	10K 5% 0805 RC11
3505	4822 051 20473	47K 5% 0805 RC11
3506	4822 051 20473	47K 5% 0805 RC11
3507	4822 051 20473	47K 5% 0805 RC11
3508	4822 051 20473	47K 5% 0805 RC11
3509	4822 117 10833	10K 5% 0805 RC11
3510	4822 117 10833	10K 5% 0805 RC11
3511	4822 117 10833	10K 5% 0805 RC11
3518	4822 117 10833	10K 5% 0805 RC11
3519	4822 117 10833	10K 5% 0805 RC11

3520	4822 117 10833	10K 5% 0805 RC11
3521	4822 117 10833	10K 5% 0805 RC11
3522	4822 117 10833	10K 5% 0805 RC11
3523	4822 051 20008	0R00 MAX 0R05 0805
3524	4822 051 20008	0R00 MAX 0R05 0805
3525	4822 051 20008	0R00 MAX 0R05 0805
3526	4822 051 20008	0R00 MAX 0R05 0805
3527	4822 117 10833	10K 5% 0805 RC11
3528	4822 117 10833	10K 5% 0805 RC11
3597	4822 051 20008	0R00 MAX 0R05 0805
3698	4822 051 20008	0R00 MAX 0R05 0805
3751	4822 051 20478	4.7R 5% 0805 RC11
3752	4822 051 20478	4.7R 5% 0805 RC11
3753	4822 051 20471	470R 5% 0805 RC11
3754	4822 051 20272	2.7K 5% 0805 RC11
3755	4822 051 20272	2.7K 5% 0805 RC11
3757	4822 051 20223	22K 5% 0805 RC11
3758	4822 117 10833	10K 5% 0805 RC11
3759	4822 051 20008	0R00 MAX 0R05 0805
3760	4822 117 10833	10K 5% 0805 RC11
3761	4822 117 11449	2.2K 5% 0805 RC11
3762	4822 117 10833	10K 5% 0805 RC11
3770	4822 117 10833	10K 5% 0805 RC11
3771	4822 117 10833	10K 5% 0805 RC11
3772	4822 051 20479	47R 5% 0805 RC11
3773	4822 117 11383	12K 5% 0805 RC11
3774	4822 117 11383	12K 5% 0805 RC11
3775	4822 051 20334	330K 5% 0805 RC11
3776	4822 051 20471	470R 5% 0805 RC11
3777	4822 117 11383	12K 5% 0805 RC11
3778	4822 051 20479	47R 5% 0805 RC11
3779	4822 117 11383	12K 5% 0805 RC11
3780	4822 051 20334	330K 5% 0805 RC11

5172	4822 157 10975	IND FXD EL0405 120UH 10%
5173	4822 157 71184	IND FXD EL0405 10UH 10%
5260	4822 242 80259	RES XTL 4.332MHZ 20P AT-51
5261	4822 157 71206	IND FXD EMI 100MHZ 600R
5420	4822 157 70935	COIL ASSY 97UH 10A
5500	4822 157 11207	IND FXD EL0405 1000UH 10%
5501	4822 242 10711	RES CER CST8.00MGW

6200	4822 130 30621	DIO SIG 1N4148
6402	4822 130 30621	DIO SIG 1N4148
6403	4822 130 30621	DIO SIG 1N4148
6420	4822 130 10488	DIO REC S3G
6430	4822 130 34173	DIO REG BZX55-F5V6
6431	4822 130 30862	DIO REG BZX79-B9V1
6440	4822 130 30621	DIO SIG 1N4148
6441	4822 130 30621	DIO SIG 1N4148
6444	4822 130 34173	DIO REG BZX55-F5V6
6445	4822 130 34173	DIO REG BZX55-F5V6
6503	4822 130 30621	DIO SIG 1N4148
6504	4822 130 30621	DIO SIG 1N4148
6505	4822 130 30621	DIO SIG 1N4148
6506	4822 130 30621	DIO SIG 1N4148
6751	4822 130 30621	DIO SIG 1N4148
6752	4822 130 34174	DIO REG BZX79-C4V7

7200	4822 209 12723	IC TDA7342/013
7230	4822 209 83159	IC LA2000
7260	4822 209 31981	IC SAA6579T/V1
7302	4822 209 33629	IC TDA7375
7303	4822 209 33629	IC TDA7375
7402	4822 209 15418	IC L4949ED
7420	4822 130 40995	TRA POW BD438
7430	4822 130 63539	TRA POW BD241A
7432	4822 130 10839	TRA POW 2SD2061
7440	4822 130 60511	TRA SIG BC847B
7441	4822 130 60511	TRA SIG BC847B
7500	4822 209 15419	IC TMP87PP21F-RC329
7501	4822 900 11034	EEPROM ST24W16M6(PROG)
7750	4822 130 44283	TRA SIG BC636
7751	4822 130 60511	TRA SIG BC847B
7770	4822 209 33162	IC MC4558IDT

CDS-36PR

CDS-36PS

Service
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PHIL-05032

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Windmühlenstr. 41 · 31178 Giesen/Emmerke
Tel.: 0 51 21 / 6 00 20 · Fax 0 51 21 / 60 02 54

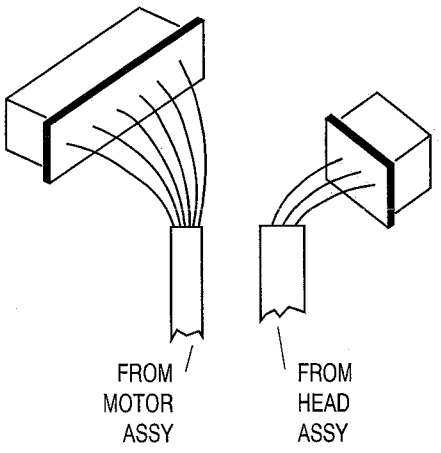
Supplement

ServiceManual

12 V

For this version, please refer to the Service Manual
CDS-36MH3 4822 725 24114, with the following exceptions:

- Different interface connectors:
  Item 90 (see exploded view on next page): only for CDS-36PR
  (no service item);
  CDS-36PS has separate motor/switch and head signal connectors
  (no service items) - see figure below: 4704



- Version CDS-36PR: bottom plate added.

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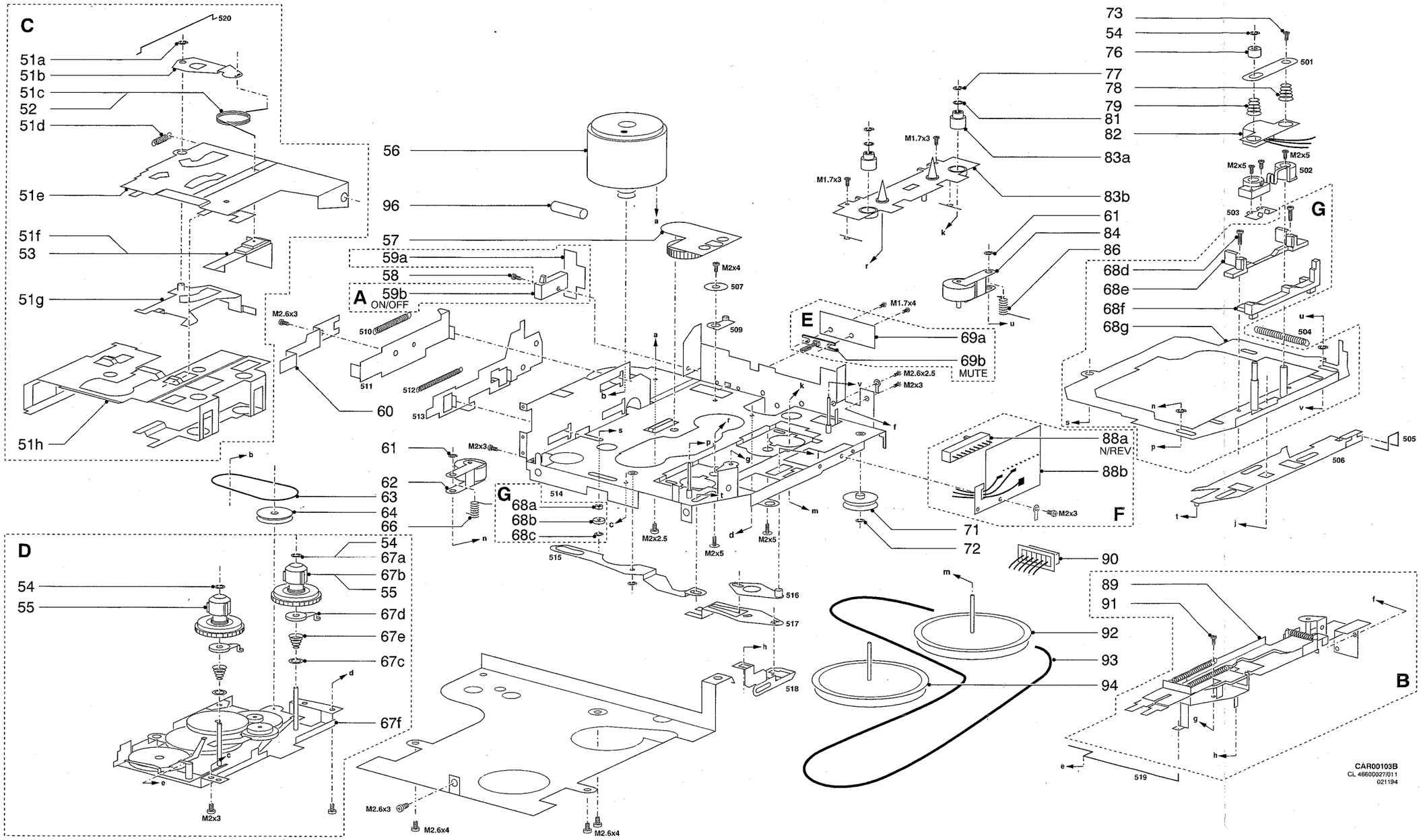

Note: ONLY those position numbers mentioned here are service spare parts.

	4822 691 10421	Deck CDS-36PS complete		59	4822 277 21603	Switch, ON/OFF	2)	73	4822 502 13969	Screw M2X4		91	4822 502 13968	Screw M2X4		G	4822 466 83156	Head plate assy	1)
	4822 701 13942	Deck CDS-36PR complete		61	4822 532 11631	Ret. ring 1.5		76	4822 532 21456	Bushing for head		92	4822 528 60422	Flywheel, NOR			4822 395 30054	811/CTM	
52	4822 492 63888	Torsion spring	1)	62	4822 528 81503	Pressure roller, REV		77	4822 530 70447	Ret. ring 1.6X3.2		93	4822 358 31181	Belt, large			4822 397 30069	SBC419	
52	4822 492 42712	Torsion spring	2)	63	4822 358 31263	Belt, small		78	4822 492 52301	Spring for head, right		94	4822 528 60423	Flywheel, REV			4822 397 30071	SBC420	
53	4822 403 53313	Cassette guide		64	4822 522 33229	Pulley gear		79	4822 492 52302	Spring for head, left		A	4822 214 52245	Switch1 pcb assy	1)		4822 389 20035	Drop in cassette	
54	4822 532 51953	Washer 1.6X0.25		66	4822 492 42599	Torsion spring, REV		81	4822 532 51955	Washer 2.1X3.5		B	4822 404 21324	Lever bracket assy	1)		1) only CDS-36PR		
55	4822 528 10903	Reel spindle assy		69B	4822 276 13519	Switch, MUTE		82	4822 249 30211	Head, playback		C	4822 256 92264	Cassette holder assy	1)		2) only CDS-36PS		
56	4822 361 30426	Motor assy		71	4822 528 81468	Pulley, for large belt	1)	84	4822 528 81504	Pressure roller, NOR		D	4822 528 10908	Reel base assy	1)				
57	4822 522 33228	Idler arm with gears		71	4822 528 81527	Idle pulley	2)	86	4822 492 42598	Torsion spring, NOR		E	4822 276 13571	Mute switch assy	1)				
58	4822 502 13967	Screw M1.7X6		72	4822 532 51952	Washer 1.2X0.25		88A	4822 277 21743	Switch, NOR/REV		F	4822 214 52246	Switch2 pcb assy	1)				